REPORT

OF THE

COMMITTEE

ON

MUNICIPAL OWNERSHIP

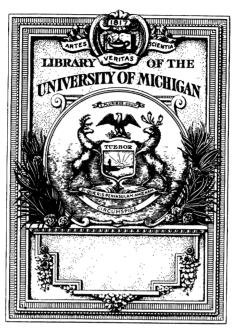
OF

RAILROADS



VOL.II., 1896.

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OF THE

ASSEMBLY)

TO

Investigate the Desirability of Municipal Ownership of the Street and Elevated Railroads, of the Various Cities of the State.

TRANSMITTED TO THE LEGISLATURE FEBRUARY 11, 1896.

VOLUME II.

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- Q. Do you transfer with any other company? A. Yes, sir; with the Third Avenue Cable Company, with Grand Street line, and Grand Street and Battery and Cortlandt Street line, and Canal Street and Battery.
- Q. You take transfers from their trains and they from yours? A. Yes, sir; that has been in existence since a year ago the 1st of May.
- Q. Is that adjusted by the tickets taken up? A. Yes, sir; we exchange the tickets that have been collected, and wherever there is excess of tickets the parties turning in the excess get remuneration for them at one-half rates.
- Q. You have no reports of the delivery of those tickets; that is, you do not settle on such reports? A. We settle every month; simply a statement made.
 - Q. That is based on the tickets taken up? A. Yes, sir.
- Q. And not on those put out? A. No, sir; the tickets are put out every day; they do all the collecting and they bring the tickets to our office.
- Q. Are there any other lines with whom you have transfer arrangements? A. No, sir.
- Q. About what are the gross receipts of your lines? A. Last year they were about \$720,000.
- Q. Have you ever figured out what percentage of the gross receipts is consumed in operating expenses? A. Yes, sir; we do that every year in making our State report.
- Q. About what is it? A. Last year it was about 75 per cent., excluding taxes, and about 78 per cent. and a fraction including taxes
- Q. That included all fixed charges, save the interest account, if any? A. Yes, sir.
- Q. Has your company ever had in contemplation the subject of electrifying these lines? A. We have been waiting for a year or two until something developed we considered nearly perfect, and we are expecting to find that before long, and we expect to adopt it; so many are experimenting we thought we would not; we are not very anxious to change our power.

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- Q. Do you think it is cheaper to operate the road by electricity? A. I do not know that we have figured on that as yet; our favorite plan is this underground electricity; if it works all right in the winter we will probably adopt it.
 - Q. That is, carrying the trolley wire underground? A. Yes, sir.
- Q. Has your road paid a dividend every year; that is, for some years? A. For the past year we have; the previous year, I think, we passed three of our quarterly dividends; we paid a very small dividend that year; during the depression of business our receipts fell off largely.
- Q. For what amount is your company capitalized? A. One million two hundred thousand dollars.
- Q. How long has it remained at that? A. It has always been that.
 - Q. That was originally the capital stock? A. Yes, sir.
 - Q. And has it a bonded indebtedness? A. Yes, sir.
 - Q. Of what amount? A. Nine hundred thousand dollars.
- Q. And that is substantially the amount of which the road stands charged? A. We have some certificates of indebtedness, \$1,100,000.
 - Q. One million one hundred thousand? A. Yes, sir.
- Q. When were those issued? A. In 1884; at that time it was \$1,200,000; there has been \$100,000 of them paid off.
- Q. Bearing what rate per cent.? A. Originally it was 6 per cent.; it has been reduced to 5 per cent., so it stands now 5 per cent.
 - Q. That was put out in 1884? A. Yes, sir.
- Q. How was that debt created, do you know? A. It was the dividend of the accumulated surplus of the earnings of the previous years up to that time; it was made a dividend to the stockholders of record as accumulated surplus.
- Q. If you had a surplus why not divide the surplus? A. I do not know what the reasons were; I should assume that they preferred to keep a portion of it and not pay it all out; I do not know what the reasons were, as I had nothing to do with it.
- Q. These certificates were put out by the company to the stockholders? A. Yes, sir.

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- Q. In other words, it was a dividend declared in certificates of indebtedness? A. Yes, sir.
- Q. Did the company actually have the money with which to pay that dividend at that time? A. No, sir; I think not; I do not know but I used the word surplus in error, for it should be used as assets.
- Q. That is, the surplus was put into betterments instead of declaring dividends? A. Yes, sir.
- Q. Were the bonds held by the stockholders also? A. Not entirely so.
- Q. To some extent? A. I could not say as to that; they were not issued to the stockholders; anyone had a chance to buy them.
- Q. In the issuing of this \$1,200,000 of certificates of indebtedness each person who had a dollar of stock was entitled to a dollar of certificates? A. Yes, sir.
- Q. How did it happen they paid off \$100,000 of it? A. They had the money to do it, and I guess they were not getting very much for the money they had, and I think they thought by retiring \$100,000 they would save 6 per cent. on that.
 - Q. Was that drawn pro rata? A. They cast lots, I think.
- Q. And the fellow that drew the lot had to give up the certificate and take his money? A. I guess that is it.
- Q. Is there any other indebtedness of the company? A. No, sir; nothing.
- Q. And your road stands charged then with \$3,200,000? A. Yes, sir; that is correct.
- Q. And you have got about 20 miles of single track? A. The figures I gave you represented a single track; 20 miles.
 - Q. Twenty miles of single track? A. Yes, sir.
- Q. So your road stands charged with \$160,000 per mile? A. That is, if you count the whole thing.
 - Q. Single track? A. Yes, sir.
 - Q. That includes equipment? A. There is real estate, of course.
- Q. Yes; I know; your stables and car-houses and the like? A. Yes, sir.

- Q. What does the value of the real estate stand on your books at? A. Eight hundred and sixty-five thousand dollars, in round numbers.
- Q. Consisting of what? A. Buildings entirely, which are used; that is, the buildings and ground and depots are all.
- Q. Your company owns the fee of the land? A. Yes; and it is entirely clear.
- Q. This \$900,000 is a mortgage securing those bonds? A. Yes, sir.
- Q. Clear except that mortgage? A. Yes; that covers everything, of course; I mean there is no separate mortgage on it.
 - Q. How much dividend did you pay last year? A. Six per cent.
 - Q. On the stock? A. Yes, sir.
 - Q. And 5 per cent. on the certificates? A. Yes.
- Q. That stands there to-day virtually as stock issued out of the surplus? A. Yes, sir.
- Q. So that the road actually last year paid upwards of 10 per cent.? A. Yes, sir.
 - Q. On the capital stock which was issued by it? A. Yes, sir.
- Q. At what is the stock of your road quoted now? A. I think it is quoted at 170, is the last I have seen in the papers.
- Q. Do you know what the certificates of indebtedness are quoted at? A. I think about 103 in the same paper, was the quotation.
- Q. What rate of dividends have you paid for ten years? A. I think not higher than 8 per cent.
 - Q. Not higher than 8? A. No, sir.
- Q. Has that been usually the dividend, 2 per cent. a quarter? A. Yes, sir.
- Q. Up to last year? A. I think in the year 1893 I think we passed two dividends and in 1894 we passed three.
- Q. At what does your equipment, including the horses, stand charged on your books? A. Three hundred and fifty-eight thousand dollars.
- Q. Three hundred and fifty-eight thousand dollars? A. Yes, sir.

- Q. And your construction account stands at what? A. Three hundred and fifty-seven thousand dollars.
- Q. And real estate? A. Eight hundred and sixty-five thousand dollars.
- Q. Into what do you put the balance of the \$3,200,000? A. The value of the franchise is the principal part of it; I might state here for your information that my recollection and knowledge this was a charter that was given to a variety of individuals in 1863, and they afterwards, or there was a company formed, and they issued the capital stock for the purchase of that franchise so the company really never got very much for the capital stock.
- Q. You balance your book in some way, and in doing that you charge \$865,000 to the real estate account, \$358,000 to equipment and \$357,000 to construction? A. Yes, sir.
- Q. To what do you charge the balance? A. The cost of the franchises and the —
- Q. That is a forced entry, is it not; that is an arbitrary amount to balance? A. If your capital stock is \$1,200,000 you must have a separate entry to represent the cost of the franchises; that is the way it stands on our books.
- Q. Yes. A. The total cost of the road, including franchises and all, is \$2,789,000.
- Q. That is the cost of your road and equipment and real estate? A. No; that does not include the equipment; that is the cost of the franchises, construction and the real estate; in addition to that we have the cost of the equipment, which is \$358,000 I am giving these in round numbers, making the cost of the road \$3,147,853.80.
- Q. You make up the balance of that by cash on hand? A. Yes, sir; in the way of supplies and cash on hand and other small items.
- Q. So you charge the account with the capital stock? A. Yes, sir.
 - Q. As cost of the franchises? A. Yes.
- Q. Was anything actually paid to the city for that? A. I do not think so; I never knew that there was at that time.
- Q. You charged the real estate with \$385,000, construction with \$357,000; that makes you \$127,000? A. Yes, sir.

- Q. Then you add cost of equipment, supplies and cash, making up the \$3,200,000? A. Yes, sir; that is it.
- Q. What kind of a rail do you use? A. The most of our rail is rail that has been down for years; it is a center-bearing rail; all our new relaying has been the side-bearing rail.
- Q. You have not been able to relay any center-bearing rail in several years? A. No, sir; we have not attempted to; we have a little of the girder rail in two places; that is, the side-bearing; that is all the new work we have put in of any extent, although we have been relaying some lately a little.
- Q. To electrify your road, will it require a reconstruction of it? A. Yes, sir; I think entirely.
- Q. When you undertake it you have got practically your franchises? A. Yes; that is all.
 - Q. Of value? A. And material.
- Q. And your real estate, of course? A. Yes; that real estate stands at just what it cost.
- Q. For ten years can you tell us the dividends paid by your company each year? A. I could not exact, but I do not think that it exceeds 8 per cent. in the years it was paid, and the five dividends that we passed.
- Q. In 1893 and 1894? A. Yes, sir; since then we have not paid but at the rate of 6 per cent.; last October we renewed.
- Q. Do you think it was 8 per cent. prior to October, 1893? A. Perhaps in 1883 it might have been 10, but I think since 1884 it has been 8.
- Q. I do not care about it to a cent, but was that substantially it? A. Yes.
- Q. So the road for ten years prior to 1893 practically paid 13 per cent. on its capital stock? A. It would be really more than that, because the certificates bore 6 per cent. up to within two years, when the change was made.
 - Q. It would be 14 per cent. then? A. Yes, sir.
 - Q. Do you have any system of reducing fares or selling quantities of tickets at a time at a lesser rate than 5 cents? A. No, sir.
 - Q. It is simply a flat rate of 5 cents? A. Yes, sir.

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- Q. At what hours of the day is your traffic the heaviest? A. For about two hours in the morning, say from 7 to 9 o'clock, and from half past 4 until half-past 6 in the evening.
- Q. And is there any one class of people that patronize your road during those hours more than any other? A. Mostly the laboring classes.
- Q. Don't you think your road could afford to reduce the fares during those hours? A. I hardly think so, and meet their expenses under this transfer system; I do not think we get anything out of that; I think it is an expense to us; we have to increase our accommodations so much to meet that particular travel.
- Q. The capital stock that was issued just as a mere matter of love and gone up to \$1.80 cash value has been paying practically 14 per cent. dividends for some years, might stand a slight reduction of fare between those hours when the laboring people are using the road to ride to and from their work, could it not? A. I would hardly think that they could, simply because we are giving those people the benefit of a full ride on our road and the Third Avnue road, where the largest part of our crowded travel goes that we virtually get $2\frac{1}{2}$ cents each way.
- Q. The Third Avenue gets the worst of it? A. Very little difference.
- Q. But they are liable to carry passengers further on their trains than you do on your trains? A. Very likely, as a matter of distance.
- Q. You see, Mr. Landon, your stock does not represent any money invested; you have constructed your road with the bonds and accumulations, and accumulated surplus, of \$1,100,000 on which you are paying interest? A. Yes, sir.
- Q. Now the investment would be pretty good if the stock represented the actual cash investment of \$1,200,000 investment by the stockholders and paying 10 or 12 per cent. dividends; what rate of interest do the bonds bear? A. Five per cent.
- Q. What are they quoted at? A. I think about 114, the last I recollect of seeing.

Q. How long do they run? A. They were issued at 40 years, I think.

(Witness refers to memorandum.)

Forty years from 1892.

- Q. You funded the debt at that time? A. Yes, sir.
- Q. Have you ever had under advisement the subject of reduction of fare at any time? A. The original charter, I think, provided a six-cent fare, and that was voluntarily reduced to five cents.
 - Q. Since that time have you? A. No, sir.
- Q. What is the assessed valuation of the property in the city? A. I could not speak from memeory, for it is made up in various lots.
- Q. Can you tell me what the real estate is assessed at? A. What was the first question you asked?
- Q. The assessed valuation of the property in the city? A. No, I do not know; I could not give it from memory.
- Q. Could you give the assessed valuation of the real estate? A. That we own?
- Q. Yes? A. No; I thought that was what you referred to; it is in various lots; I do not recall what the aggregates were.
- Q. Do you know what your road is assessed at per mile? A. No, sir; I could not say that from memory.
- Q. About what is the distance, Mr. Landon, from the Grand street Ferry on the East side, to Desbrosses street Ferry on the West side, by your line of road? A. I think it is $2\frac{1}{4}$ miles.
- Q. And about what is the distance to Cortland street? A. I think about $2\frac{3}{4}$ miles.
- Q. How long does it take you to make the trip? A. To Desbrosses street?
 - Q. Yes? A. I think the time is 22 minutes.
 - Q. Going across? A. Yes.
- Q. Forty-four minutes for the round trip? A. Yes, sir, without counting the stand time.
- Q. What wages do you pay your conductors and drivers? A. Two dollars a day.

- Q. For how long? A. Ten hours' service.
- Q. And if they work extra time do they get extra pay? A. Yes, sir
- Q. Does that involve a given number of trips? A. Yes, sir; that is what we call a full day's work; it is 10 hours in 12; we do not work them overtime unless they get caught on the road by blockade or fire or something of that kind and are unavoidably detained.
 - Q. I think that is all.

Recess until 2 p. m.

Matthew P. Breen, called and sworn, testified:

Mr. Wade:

- Q. Do you reside in the city of New York? A. Yes, sir.
- Q. And in what business are you engaged? A. I am a lawyer.
- Q. How long have you been practicing in the city? A. Over twenty years.
- Q. Are you connected with any surface street railroad or any elevated railroad in the city? A. I am counsel for a railroad known as the People's Traction Company of the city of New York.
- Q. And how long have you occupied that position with reference to that company? A. Since its organization, about, I think, less than a year ago.
- Q. It was organized during the present year? A. My recollection is that it was organized with the present year, I think.
- Q. Are you connected with the road in any other manner than as counsel? A. No, sir.
 - Q. You are not a stockholder nor director? A. No, sir.
- Q. Has the company any road constructed or in process of construction? A. No, sir.
- Q. Has it any franchise secured for the purpose of building a road? A. It has the consent of the municipal authorities of the city of New York for the construction of a road in the Twentythird and Twenty-fourth wards.
- Q. Has that been perfected by obtaining the property owners' assents? A. No, sir.

- Q. How much of the street does the franchise granted by the municipal authorities cover? A. Twenty-one and one-half miles.
- Q. What character of road is contemplated? A. I should correct that, $20\frac{1}{2}$ miles.
- Q. What character of road is contemplated? A. An electric road.
- Q. How much is the company capitalized at? A. One million five hundred thousand dollars.
- Q. How much of it is subscribed? A. I really do not know, sir.
- Q. You do not know whether all is subscribed or not? A. The officers of the company can tell you that.
- Q. Recently has your company been engaged in an effort to secure other franchises in the city? A. No, sir.
- Q. Was your company one of the bidders? A. I will qualify that by saying that recently the company has filed a certificate of an additional route over 29 miles of road in the Twenty-third and Twenty-fourth wards.
- Q. Was your company recently a bidder for a franchise? A. It was a bidder for the franchise with regard to which the consent was given by the common council referring to the $20\frac{1}{2}$ miles.
- Q. What was the character of that consent given by the council? A. The consent awarded the franchise to the People's Traction Company, subject to various conditions specified in the consent, among which was, that the franchise should be set up by the comptroller at public auction.
- Q. That is under what we refer to as the Cantor act? A. It was an amendment to the Cantor act; I do not think the Cantor act went quite as far as that; it says they may set it up at public auction, but this was mandatory, the act of 1892, that we were operating under, so far as that proceeding is concerned.
- Q. So far as that feature goes the consent of the city upon one condition that you became purchaser of the franchise at that public sale? A. As the highest bidder.

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- Q. Yes. A. That is the system provided by the statute, to secure proper compensation to the city for the use of its streets.
 - Q. And your company bid upon that franchise? A. Yes, sir.
- Q. Of what amount? A. The company bid from a one-eighth, I think, of one per cent. and carried on the bidding with two other contestants, until it reached, I think, about 40 per cent. or somewhere about 40 per cent., then the People's Traction Company in this form: 97 per cent. for the first five years, and 95 per cent. thereafter, and demanded that the bid be knocked down to them at that price, at that figure, on the ground that that was the legal limit to which the bidding could go; that is to say, that the 97 per cent. for the first five years and that the 3 per cent. provided by statute to be paid in any event and the 95 per cent. thereafter, and the 5 per cent. to be paid after five years, went to the full extent of a legal bid.
- Q. That consumed the entire gross receipts? A. Yes; and the representatives of the company, as I stated, protested against any further bid; the corporation counsel's assistant was present, Mr. Dean, and he directed the bidding to go on and subsequently intimated that he would give a legal opioion.
- Q. Give a what? A. Give an opinion to the comptroller upon the subject of our bid, as to whether there could be any greater bid than 100 per cent.; the matter was in that shape when one of the contestants, the owners of the Southern Boulevard Railroad Company, which had bid $3\frac{1}{2}$ per cent. and quit, procured an injunction from the supreme court restraining the comptroller from continuing the bid or from deciding the question on the bids that were offered, which involved, of course, and restrained him from passing on the question that it should be knocked down to us on the bid of 97 and 95 per cent., as I have described, and the matter was tied up in that way.
- Q. Was that the highest bid that was made? A. No; after this protest had been made the Comptroller stated that under the verbal advice of the corporation counsel then and there given, that he would continue.

Q. Was that before or after the injunction? A. Before the injunction; the day of the sale; then the bidding was continued over the 100 per cent. by a company known as the Northern New York Junction Traction Company, I think; the Northern New York Junction Traction Company, I think, is the name of it.

Mr. Sheehan.—Strike out the "Junction."

- A. New York Traction Company, which was organized a few days before the bidding, or, I believe a day or so before the bidding, and thereupon our representative bid 1,000 per cent., first stating: Without waiving any of the company's rights under the bid of 97 and 98 per cent.
- Q. Was that your bid? A. Yes; I mean now the bid that exceeded the entire gross receipts.
- Q. That was your bid? A. That was our bid; and when the bidding was continued by the Comptroller then our representative continued the bidding beyond that point, with the declaration that is was not waiving any of the rights of the company under the bid of 97 and 95 per cent. upon which he asked to have it knocked down to him, and without prejudice to that bidding; and, as he was instructed, that he might then after that bid 1,000 per cent., or 1,000,000 per cent., it made no difference, that the last legal bid, the one that he had made of 97 and 95 per cent.; and the bid of 1,000 per cent. was made in order to emphasize how ridiculous it was to bid any higher than the 100 per cent., because the statute says the largest percentage of the gross receipts.
- Q. You thought the thing had got ridiculous when it had reached 100 per cent.? A. It would be absolutely ridiculous on the part of the People's Traction Company to do so if it were not for the fact that they had a connection and owned; when I say owned, the parties who have control of the People's Traction Company also own another company which have franchises beyond, connecting with these particular lines, beyond the Bronx and running into Westchester county; we have the route lying out on the Boston road connecting with the People's Traction, and running thence to the various points of Westchester county to the boundery line, which takes in the towns of Westchester, East

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Chester, Pelham, Mamaroneck, and Rye, and includes the villages within those towns of Salome, New Rochelle, Largemont and Port Chester; and also another line running from Hunt's Point at the Bronx at the intersection of Lafayette, in the Twenty-third ward and running along through Unionpoint in Westchester town, which is a large settlement, and running along the Eastern Boulevard, or Shore road, along through Pelham, along what is known as the Shore road, and connecting with the main road at New Rochelle; now, the length of those routes are about 30 miles.

- Q. The aggregate? A. They aggregate 30 miles, and the fares to be received on the entire route were 25 cents to the Bronx or to the Harlem; besides, which, the company contemplated carrying light freight and packages along their route through the country for the accommodation of the people in those various towns, and as a source of profit to the company; so that the People's Traction Company, in order to preserve their interest in the upper company, thought it more advantageous to even bid 100 per cent. of the gross receipts, rather than let a hostile company get control of the lower road that would destroy the efficiency and perhaps the construction of the upper one; in other words, it was seeking after what they deemed to be 50 cents — that is, 25 cents in fares to the Bronx and what was supposed to be equal to 25 cents more in the carrying of light express and packages, and in order to reach that condition of affairs thought it was more profitable for them to surrender 5 cents that they received between the Bronx and the Harlem than to permit the upper company to be destroyed, such as I have suggested; that was the theory on which the bid was made.
- Q. Well, it would be in a position then where there would be no inducement to the company to collect any fares in either the Twenty-third or Twenty-fourth wards? A. We might have given a free ride to the people there, if we were obliged to do so; I do not know what the policy of the company would be.
- Q. It would be more advantageous to the company? A. It would make the upper road a very prosperous concern if you were

to give a transfer ticket through the Twenty-third and Twenty-fourth wards.

- Q. Your road beyond the Harlem or Bronx is in contemplation and not constructed yet? A. We have got the franchise absolutely from the municipal authorities through the towns of Westchester, on both roads,—Westchester, East Chester, Pelham and Mamaroneck, and it is pending in the town of New Rochelle and in the town of Rye.
- Q. Have you commenced the construction of the road? A. No, sir; we did not want to commence the construction of the road until we got the right of way into the city of New York.
- Q. How high did you go with your bidding there? A. Really it is so high that I forget that; I think 6,975 1-16.
- Q. Six thousand nine hundred and seventy-five per cent.? A. Yes; and immediately below was the as I stated before, we regarded it as bidding in the air when we left the 100 per cent.
- Q. Are you sure you did not get above the air? A. Yes; I guess we were in the clouds; but we did not regard anything over 100 per cent. as a genuine bid on the part of anyone; we still think that bid was the legal bid and we are entitled to the franchise.
- Q. What do you think would be 6,975 per cent. of 5 cents? A. I do not know, sir; I am a poor man at figures.
- Q. Then you thought that the franchises that you had obtained beyond the Bronx were of sufficient value to justify you in building 20 miles of road in the twenty-third and twenty-fourth wards, operating it and either collecting no fare upon it, or paying to the city 6,175 per cent. on it, if you did collect any? A. No; I stated before that we regarded the 100 per cent., the 97 and 95 per cent. which, with the upset figure of 3 and 5, made the 100 per cent., that that was the last legal bid.
- Q. Now let us assume that you had your road connected in Westchester or built in Westchester county? A. Yes.
- Q. And you desired a small piece of road here to make that connection over which you were authorized to charge a fare of 5 cents to each passenger; under that act authorizing the sale in the manner in which it does, wouldn't it authorize you to take out

of the receipts from the other part of your road money to pay to the city for the franchise in excess of the gross receipts on that particular road? A. Well, I do not know exactly what the policy of the company would be on that subject.

- Q. Well, you see it could not entirely rest on the policy of the company after the franchise is awarded to you at 6, 975 per cent.? A. We did not ask the franchise to be awarded to us at that price; we did at the 100 per cent.
- Q. You bid there? A. We bid in order to keep up the fight, I presume, more than anything else; I say, it was not regarded as a bid that had any legality; we went to the extreme limit; we protested.
- Q. Well, but you kept bidding; what would your protest amount to in the face of a bid? A. The fact of our bidding would not jeopardize our bid of 100 per cent.
- Q. It would not help any? A. Yes; if the law says you can not bid higher than 97 and 95 of the gross receipts in addition to the 5 per cent., my contention is whatever you bid after that would not affect it.
- Q. If that was the last legal bid that could be made, if you had stayed by and let others go on with the bidding it would not have invalidated your bid? A. Not at all.
- Q. So your protest did not aid it at all? A. It had some force, probably.
- Q. What I mean is, that it did not help it as a legal proposition? A. We did not enter into the new bidding after the 97 and 95 per cent. was bid without indicating by protest and these declarations, that we regarded ourselves as having made the last legal bid.
- Q. Do you understand from your company that they are willing to construct 20 miles of road in the twenty-third and twenty-fourth wards and operate it and charge the patrons of the road the usual rate of five cents, and turn that entire amount over to the city? A. I do not know what they intend to charge; they may have charged less.
- Q. You would not regard it as compliance with the law for you to take the franchise and operate that piece of road gratis, and the

city get nothing for it, when you had bid 100 per cent? A. They could charge less than five cents, and then make connection with the 21 miles of road in Westchester.

- Q. Supposing they charge one cent? A. Yes.
- Q. Do you understud that the position for real men to take was to turn over to the city the entire gross receipts of the system, whatever those receipts might amount to? A. That was what they contemplated; possibly they had some hope; I am free to acknowledge, that as this bid that was made was as we considered it a misuse of a statute which was intended for proper purposes to secure to the city a proper and adequate compensation for the use of the streets; that after the People's Traction Company had gone through all the trouble and labor of laying $20\frac{1}{2}$ miles of streets in a territory where the streets were not yet all constructed, nor some of them even begun to be constructed, but the route was in pursuance in a great many instances of new laid out streets under the commissioner of street improvements in the twenty-third and twenty-fourth wards; it involved a great deal of investigation to lay out that route; it involved an application to the board of aldermen, and numerous discussions before the railroad committee of the board of aldermen; the railroad committee of the board of aldermen visited the district to examine the routes and their layouts, and after the property-owners' association and among them members of the board of trade had passed resolutions favoring the People's Traction Company as a source of development of the twenty-third and twenty-fourth wards, being a crosstown line, the Union Company, and their road running north and south, that after all that had been gone through, and the board of aldermen unanimously granted the consent to the People's Traction Company, on the theory I stated, that it was for the benefit of the district and its development and then that a company that had simply organized as an aid to the rival company, known as the Huckleberry, and had organized only the day before the bidding, and got the Southern Boulevard, which is also connected with the Union Railroad Company, as another bidder and ran the bidding up to a figure which was not the system of bidding contemplated by the

statute — the statute did not contemplate ruinous bidding; the Legislature meant, I presume, as we will have to presume, that the statute was for proper purposes to secure an adequate compensation to the city of New York for the use of its streets; in other words, it was a method to secure to the city of New York an adequate and proper consideration for the use of the streets; now, then, another company comes in immediately before the bidding after the People's Traction Company had gone through all this work and received the sanction of the municipal authorities and approval of the mayor, that their starting in to bid in that manner was a misuse of the statute, and we had the hope, I am frank to say, that under such circumstances the city of New York would, perhaps, through the aid of the Legislature or some other way, adjust it subsequently in such a way as would give to the city adequate and proper compensation for the use of the streets.

- Q. In other words, you never contemplated building this road under a contract to pay to the city 6,975 per cent. of the gross receipts? A. No; not that; but that they contracted to build a road on a basis of 97 and 95 per cent.
- Q. Do you think they really contemplated building the road on that? A. I think they did, and then trust to the fairness of the city, and if it could not be done or was not practical, as I think it could be under the circumstances I speak of, because it would reach 50 cents on the roads above.
- Q. Who would have authority to make a reasonable and proper adjustment of that in the future? A. I think the proper fund would be the sinking fund of the city of New York.
- Q. Is that clothed with any power to change the contracts with your company that you have entered into in consequence of public bidding? A. I think there is some such power.
- Q. That makes your legislative enactment a farce? A. I think that the legislative enactment has proven to result in a farce.
- Q. If this transaction was the result I think you are right? A. Yes, and other results; and we say, that if, after getting the franchise from the municipal authorities, if the Legislature put on the condition or provided that a further condition should be put on

after the corporation had received the municipal authorities consent and that they should at least pay three and five per cent. of the gross receipts.

- Q. Three for the first three or five years, and five thereafter? A. Yes; and with all the other things provided in the railroad law, then a sensible law, I think would be, that they should pay in addition to that, that they should pay such other or further fund that the sinking fund of the city of New York, who have charge of the real estate of the city of New York, and such further sum as the city of New York may under all the circumstances impose upon it.
- Q. You would not make it the subject of contract at all? A. Then you would have a definite and positive system of granting railroad franchises and avoid the spectacle that was presented upon the occasion referred to; the mere fact that it is tied up—
- Q. Supposing, Mr. Breen, that the sinking fund commission were clothed with power to sell the franchises at such prices as it, in its judgment, thought was advantageous to the city? A. Yes.
- Q. And that transaction was carried on by the commission honestly and in the interests of the city, do you think that would be a better way of disposing of the franchises than to do so under the so-called Cantor Act and its amendments? A. I think it would because it would avoid the uncertainty of construction.
- Q. When you make the bid under this act, are you compelled to put up a bond? A. Fifty thousand dollars.
 - Q. And you did so? A. Yes, sir.
- Q. Supposing the contract is awarded to you at 6,975 per cent.? A. That bond is responsible if we do not as I said before, we do not recognize as having any validity, any bid beyond the 100 per cent.
- Q. Supposing it should be determined that that was a valid bid? A. Then the bond would be forfeited to the city of New York, \$50,000.
- Q. You could not undertake to build the road? A. Unless you ran over that section for nothing.

Q. Well, you cannot pay at 100 per cent. of its gross receipts; that is running it pretty near for nothing? A. Yes; but, as I stated in connection with the upper lines—

By Mr. Foley:

Q. How many are there in the upper line; how many miles? A. Thirty miles.

By Mr. Wade:

- Q. Twenty miles to be run for the benefit of the city and 30 miles to pay the earning operation of the road? A. Yes; there is 12 miles of the 30 miles north of the Bronx now in the city of New York, and we are obliged to pay not one cent that we have received north of the Bronx; 12 miles of this Boston Post and Northern Boulevard are now in the city of New York by legislation of last year, and that is not subject to pay anything.
- Q. The city authorities went to work in good faith to sell these franchises under the statute, did they not? A. Yes, sir.
- Q. And the bidders have gone in there and made the whole thing a roaring farce, haven't they? A. Yes.
- Q. If your position is correct; and there is nothing the court can do but to declare your bid of 100 per cent, the highest legal bid, or annul the whole proceedings? A. That is the law, I suppose.
- Q. If you are correct in that conclusion you have demonstrated that a sale of a franchise in the city of New York, under the law as it exists to-day, is absolutely impossible, if corporations or companies see fit to make it so? A. Yes, sir; if you will pardon me I will show you how it is absolutely inoperative.
- Q. I think you have but go ahead? A. Supposing the theory you suggest of bidding the highest beyond a hundred per cent. is correct; we will assume that; now a company gets a franchise from the municipal authorities, in the manner designated by the statute, all some rival company need do is to start two new companies and proceed with the bidding; the three are in the race; the company who has received the franchise from the city and the other two companies who come in for bidding at the eleventh

hour — they are creditors of a rival company who seek to destroy the other; now, then, they can go on to bid, and there is no limit to the figures; these two companies could go on bidding forever and never come to a conclusion, and never be responsible under its bond, because you are not responsible under the bond until it is knocked down to you and under this process it need never to be knocked down and in the meantime the rival company is destroyed and it can not be built.

- Q. The law itself contemplates a rivalry in bidding? A. Yes, but there should be some limit.
- Q. Then the one that was fortunate enough to speak first and speak the limit is the only one that can get into that race? A. Yes; but all the city of New York is interested in is to receive an adequate compensation for the use of its streets; it is not a question between the city and the company; it is a question between the companies and the city of New York; so, by whatever process that figure is arrived at is the proper one; but the fact of becoming too indefinite, take this case: Here is a quasi-public institution tied up that is supposed to develop the Twenty-third and Twenty-fourthwards by this being tied up the city gets nothing; the road is not being built which would enhance the price of real estate which would in turn bring enhanced taxes into the city treasury; it is not only injurious to the company and to the property owners along the company's line, but injurious to the New York city treasury.
- Q. What do you think would be a fair percentage to pay to the city for this franchise? A. Well, that is a question that may be I am not the proper person to answer, because I would like to get it for nothing.
- Q. Your judgment on that I would like? A. I am afraid my interests as counsel for the road are so much that my judgment would be somewhat warped as to what the city should receive.
- Q. You seem to have been pretty liberal with it? A. Yes; we were compelled to be by these destructive engines that came upon us.

- Q. The city, then, should erect a monument to those gentlemen who created this? A. No, sir; I say on the contrary, that the city is greatly injured by the fact that this enterprise being tied up, and the fact of its being tied up or capable of being tied up by someone's going into court and saying your bid was not in good faith, or was in good faith, but not so-and-so, indicates the impracticability of the law. It should be so certain, so free from gambling that if the people of the city of New York gave a franchise after a full investigation, it should be in such a position that there would be no doubt about its construction. Because the board of aldermen gave that franchise on the theory it was a great public benefit, and the fact of restraining it now from being constructed for any purpose in or out of court, exhaust the limit of the law which says, you must commence the construction of the road one year after receiving the consent of the municipal owners and authorities is exhausted.
- Q. The consents of the board amount to nothing until the condition is complied with; that is, you become the purchaser? A. That's right; but the condition is put on for the sole purpose of securing to the city a proper and adequate compensation to the city for the use of the street; any other method that would be more precise and better would be a better statute than this one we have now.
- Q. Now, let us assume that your company can afford to build the 20 miles of road for the purpose of operating the cars over that 20 miles that you operate over, the 30 miles outside of the city, how do you think the city would be benefited the most, by charging a full fare and turning it in to the city treasury, or carrying people upon that 20 miles of road absolutely gratis? I. don't know whether it would benefit the city——
- Q. Which would be the most benefit to the city generally? A. I believe that is an open question; I think if such a condition arose as that, that we were to run for nothing, charging nothing to the passengers belonging to the Twenty-third and Twenty-fourth ward, that it would result in building up the newly acquired territory beyond the Bronx, some 15,000 acres, larger than Manhattan

Island, by some 3,000 acres, and a beautiful country, perhaps finer than any city in the world, that it would so populate that district and develop its real estate that the mere payment to the city would be a mere bagatelle to what the city would gain by the enhanced value of the land.

- Q. You know this, that when the railroad company is required to pay into the treasury of the city here and in any other city any portion of its gross receipts, as a general rule the patrons of that road are paying that money; is not that true? A. That is true.
- Q. Do you know of any reason why a laboring man living at Harlem should be forced to spend ten cents a day to get to and from his work, should have five, 10 or 100 per cent. of that money go into the city treasury to help pay the taxes upon all the property between here and the Bowery? A. Well, the condition of the law is such.
- Q. I know that is the condition of the law, but had it ought to be? A. If I were to give an opinion as to what privileges should be granted to the workingman I would probably say he should get it for a much less sum; I would prefer to see the laboring man, if you confine it to the laboring man, I would prefer to see him get the five cents or three cents or two cents.
- Q. It is not a matter of preference, and I do not want to interrogate you upon that theory at all; it is upon the question as to what is best for the community, not only the laboring man but all classes of people; in other words, how is the community benefited most by regulating this question. By seeking to turn into the treasury every dollar that can be had, or by giving to a class of people who can most ill-afford to pay a fare the benefits of a cheap fare? A. I have not reflected on that subject until this present moment, but I really think for the benefit of the community that the cheaper fare would be the best thing; I think it would probably develop outlying sections and in the long run bring more money into the city treasury.
- Q. How are these bonds executed that were put up to accompany the bids; did your company have to furnish sureties?

 A. The corporation counsel furnishes the form of the bond, and we

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have to furnish sureties, so the bond has to be good and be approved by the comptroller; we have to justify it in twice the amount of the bond in real estate; I do not know as the law provides that, but I think that is the custom adopted by the comptroller; the comptroller has power to decide what form of bond should be used.

- Q. Has this transaction in which you have taken part demonstrated to your satisfaction that the so-called Cantor Act and its amendments are not of utility? A. Not in the particular that I speak of, of the making the condition one of sale without some —
- Q. You think you would fix a maximum? A. If there was bidding at all, I should.
- Q. You know this, if there is bidding at all you would fix a maximum? A. I think I would.
- Q. You know that condition very materially; for instance, you are selling a franchise over a street that has got heavy grades; you know operating expenses over a line of that character are largely in excess of operating an electric road on level streets? A. Yes, sir.
- Q. What would you do there; have the same maximum limit? A. Well, the knowledge of the locality presumably on the part of each company would be their guide as to how much they should bid.
- Q. It would seem that the knowledge of each company would prevent suicide of the character entered into in the sale of this franchise? A. I say that no matter how you look at it the system is defective at present, in my judgment, and I can see no reason why a conservative body like the sinking fund commission of the city of New York should not, after examining the whole subject as to these lines of grades that you speak of, for instance, where the street would have to be paved, and where they would be obliged to pave the 17 feet of the new street, or any other condition that the sinking fund commission would be able to examine into, and then decide what addition, if any, to the three and five per cent. should be added to secure to the city a fair and just compensation for the use of the streets.

- Q. That would do away with the public sale entirely? A. Yes, sir; there have been instances in the city of New York, I believe, where there have been extravagant sales of that character, and the city got nothing at all, and the road was operated and where finally after some years they had to either stop the road from running or make a compromise, and in the interests of the public they made a compromise which wiped out all the indebtedness; they were to pay something like 22 per cent.; they wiped out all the indebtedness and took a lump sum of \$7,000 or \$8,000, and two or three per cent. in the future.
- Q. Give me your idea a little further on that proposition of yours; it involves the operation of two-fifths of your lines without any receipts; do you know about what percentage of gross receipts is consumed in operating expenses? A. I do not, sir; I am not at all familiar with that.
- Q. Supposing we take the least I have heard of, 53, and the highest, upwards of 80, with a maximum of 85; we will take the mean as 70 per cent, for instance? A. Yes.
- Q. And let us assume that it cost you 70 per cent. of your gross receipts to operate your road, don't you see that the expense of operating that 20 miles would more than eat up your profit you could make out of the 30? A. I do not know about that; it would be a surrender of five cents in order to get fifty.
- Q. What? A. It would be a surrender of five cents in order to get fifty.
- Q. That is, assuming you paid to the city the gross receipts? A. Yes; in other words, it is paying for the right of way into the city of New York.
- Q. Yes? A. Over the territory that runs between the Bronx and Harlem upon which we could only get five cents.
- Q. You could not run your road outside of the city long at a rate of fare three or four times what it ought to be? A. I do not understand you.
- Q. I say, you could not run your road outside of the city and collect a rate of fare three or four times what it ought to be for

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very long? A. No; we do not say that is what it ought to be; it is 5 cents between each town.

- Q. And you have got five towns? A. Yes; and a population of some 60,000 or 70,000 people, which will increase perhaps more speedily than any other section of New York in the near future; men go into railroad enterprises the same as real estate for future profit.
- Q. You expected to make enough money out of the 30 miles of road to pay all the operating expenses and pay 100 per cent.? A. Yes; but you forget that the 30 miles above brought in 25 cents, and what was estimated as 25 more as between 5 cents between the Bronx and the Harlem, 50 to 5.
- Q. Yes; the people would not stand that long? A. Which people?
- Q. Living along the line of the road? A. They are satisfied to give 5 cents between each town; they think it is a cheap ride in the country, and I think it is, too; at the time the city grows up there a different order of things may come in.
- Q. Mr. Breen, your experience here has placed you in a position where you are the highest bidder in the world on this kind of a sale, and this kind of a transaction must have attracted your attention to the statute as it exists? A. Yes.
- Q. Supposing you were to make a recommendation to the Legislature to-day, based on your experience and your judgment in respect to the sale of these franchises, or the law governing the sale of the franchises, what would you advise? A. I would advise that the law remain exactly as it is, except in one particular of the condition that it should be set up at public auction by the municipal authorities, the condition that they impose that it should be set up for sale by the comptroller to secure to the city the additional compensation to the 3 and 5 per cent.; that I would substitute for that condition, that the company should pay such other or further sum as the board of sinking fund of the city should determine was just and equitable under all the circumstances.

- Q. I do not see where the public sale would come in? A. I say I should abolish the public sale; I say I would substitute this.
- Q. In other words, you would put the sale of the franchises into the hands of the sinking fund commission, each one charged with the payment of the 3 per cent. the first five years, and 5 per cent. of the gross receipts after that? A. Understand me; I would leave it that they should pay at least 3 per cent. of the gross receipts the first five years, and 5 per cent. after; I would leave that intact; and after the common council had fully examined into the proposed route and had given the franchise, then add the further condition, in addition to the 3 and 5 per cent., that the board of sinking fund of the city, after examination of the subject and hearing argument, to add such further sum in addition as they may deem proper, with regard to securing adequate compensation to the city for the use of the streets.
 - Q. Would you make that changeable? A. What?
- Q. Would you permit them to change that from time to time? A. You asked me that question, and I think that would be eminently fair, for the reason that a road that would to-day, perhaps they would be warranted in bidding on 2 per cent. in addition to the 3 or 5, may, by some lucky circumstances, have a wonderful influx of population in the direction of their railroad; then it might be a proper thing to have the law in such a way that in such a condition that they could still add to it when they thought proper; on the other hand, if by some unfortunate circumstances the line of the road was to be depleted of population—
- Q. You would not incorporate that in your statute? A. No; but the board of sinking fund may be able to reduce the price under those conditions.
- Q. You would frame the law so it would give the sinking fund commission power to assess from year to year such a percentage as it deemed fair and equitable? A. Yes, the same as they do with real estate that belongs to the city; if the lease runs out they will add, if it warrants it, and deduct if it warrants; we must assume that the sinking fund commission is just; they want to do what is fair and right, as contemplated by the statute; that

statute was framed for proper purposes, and not for cut-throat purposes, as indicated in this sale; not a misuse of it, as we claim our rivals had recourse to; that it is misuse of a proper statute.

- Q. Wherein does their position differ from yours? A. Because after a full investigation, we received the full consent of the municipal authorities.
- Q. You could not both get it at the same time? A. We received it subject to various conditions, amongst which was that.
- Q. That condition contemplated that this company or some other would put up a bond and bid against you? A. You can see without discussion how unjust such a law as that is.
- Q. I am not defending the law? A. But that a company will go on and go to all this trouble, and after that is all accomplished, a company organized, possessing the minimum capital stock, simply for the purpose of bidding, comes in and bids against you and raises you to a high compensation; in this case they must have known we wanted to defend our upper country and drive us to quite a height; they knew they were subject—
- Q. Were you at one time connected with the Huckleberry road? A. I have acted as counsel for the Huckleberry road.
 - Q. As a stockholder? A. No.
 - Q. Or a director? A. Never.
 - Q. Or this Southern Boulevard? A. No, sir.
- Q. Were you connected as counsel or otherwise with the Huckleberry road at the time of its incorporation or prior to that? A. I think I was about that time.
- Q. Are you familiar with the act under which it is incorporated? A. Yes, I know the act.
- Q. Are you familiar with all the rights which it grants to the company? A. Yes.
- Q. Supposing, Mr. Breen, that franchise had been sold to—what was the name of this little company that was just organized? A. The Northern New York Traction Company and the Southern Boulevard were both bidding.

- Q. Take one of them; supposing that franchise had been granted to the Northern New York Traction Company, could it have become merged in the Huckleberry road and the Huckleberry road absolutely relieved under its charter by that act from any percentage to the city? A. Assuming that that act is constitutional, it could, and absolutely wipe out all percentages that it agreed to pay, and then the entire combination would only be obliged to pay 1 per cent. when they reached \$1,700 a day.
 - Q. Yes, and another when it reached \$3,400? A. Yes.
- Q. Supposing it had been granted to the Southern Boulevard, and that had been consolidated with the Huckleberry and merged with the Huckleberry, the same thing would have been true? A. The same thing.
- Q. Now, supposing you had gotten it, and the Huckleberry had swallowed you? A. We would be free also on the same theory.
- Q. You said assuming that that Huckleberry bill was not in violation of the constitution; what do you mean by that? A. I mean to say that it is not only my opinion, but the opinion of every lawyer I have spoken to upon the subject, who has examined the subject, that it is clearly unconstitutional.
- Q. For what reason? A. There are several reasons; the reason which suggests itself now, from your former question, that it grants to a corporation a special immunity and privileges which is in violation of Article 18 of the Constitution, stating the Legislature shall pass no law granting to any corporation any especial immunity or privilege whatever, and the fact of a corporation obliged to pay a percentage to the city when it is intact or not connected with any other corporation, and then that it can consolidate with the Union Railway Company and the Union Railway Company take it in and pay nothing on it except a small fraction that it would have have to pay of 1 per cent., is certainly a privilege which is so clear in itself that it is hardly necessary to discuss it, it seems to me, because it secures an immunity from paying a percentage which they originally, or a fraction of their roads, or one of their consolidated roads originally agreed to pay, a much less sum than they originally agreed to pay; and the fact that this

company should have the privilege of paying only 1 per cent., when the general Railroad Law existed, and they were exempt from that, it seems to me to be a special exemption in violation of that section for that company; then the title of the bill is to amend an act entitled "so and so" for the construction of a road in the towns of West Farms and Morrisania; that is the title of the act; yet section 3 of the act declares that this company, when formed, shall be exempt from sections 93, 95 and 98 of the General Railroad Law; now, there is not a word in the title to indicate that they were to be exempt from anything; and on the theory that was laid down by Judge Ingram, in passing upon that question, it appears that the act of 1884—

- Q. Eighteen hundred and ninety-four, wasn't it? A. Eighteen hundred and ninety-four, there was an act passed in 1894, by the same title; an act to amend an act "so-and-so."
- Q. And other laws? A. No; an act to amend title "so-and-so;" it is the same title; and then section 2 says, "All proceedings taken in substantial compliance with chapter 94 of the Laws of 1892 are hereby ratified and confirmed;" Judge Ingram says there was no indication in the title that they were going to confirm anything, and he held it was in violation of article 16 of the Constitution; if that is unconstitutional, my point is, for a greater reason, is the Huckleberry act itself unconstitutional; because that gives them a general exemption from the general Railroad Law, which is a more serious violation than simply confirming what they have done; there are half a dozen reasons more, perhaps.
- Q. Let me ask you this question, has your company, by the name of the People's Traction Company, acquired this right in Westchester county? A. No, it is in the name of another company.
 - Q. Of the People's Company of New York? A. Yes.
- Q. Supposing this contract had been knocked down to you at 6,975 1-16 per cent., and you had gone on and built your road, and leased it for 999 years to this other company up in Westchester county, the New York, Westchester and Connecticut Traction Company at a nominal rental, what would you have figured the

percentage on? A. I do not know; that is what I would say the gross receipts were.

Q. Yes, sir; to the company to whom the franchise was granted?
A. I don't know; that is another illustration of the defects of the Railroad Law.

Daniel F. Cohalan, called and sworn, testified:

By Mr. Wade:

- Q. You are an attorney at law in the city of New York? A. Yes, sir.
- Q. And have practiced for some years here? A. In New York since 1889.
- Q. You were one of the persons who took part in bidding upon this franchise of which Mr. Breen has spoken? A. I represented the People's Traction Company of the city of New York.
- Q. And acting under whose directions? A. The directions of the board of directors.
 - Q. Are you one of the counsel for the road? A. I am.
- Q. Were the directors there at the sale, or some of them? A. Some of them were.
- Q. They directed you to continue this bidding? A. I was directed to bid in the franchise.

By Mr. Nixon:

Q. Regardless of a limit? A. Regardless.

By Mr. Wade:

- A. I was instructed in this way, and we had gone over the Cantor Law as it existed, and had determined as there was a minimum bid, so there was a maximum bid, and that the maximum was 97 and 95, in addition to the upset price of 3 and 5.
- Q. That was 100 per cent., practically? A. Yes, all the gross receipts; I begun the bidding with one-sixteenth of 1 per cent., and the bid was raised by fractions of 1 per cent. until the Southern Boulevard Company bid $3\frac{1}{2}$ per cent., and withdrew, and the bidding continued by fractions until the Northern New York City

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Traction Company bid 39\frac{3}{4} of 1 per cent., and then seeing that they were staying in the race, I was instructed to bid 97 per cent. for the first three years and 95 thereafter, or 100 per cent., and demand the franchise to be awarded to the People's Traction Company of the city of New York, which I did; the matter was referred to Mr. Dean, representing the city counsel, and Mr. Dean decided he would give an opinion afterwards, and in the meantime they would continue to receive bids; the representatives of the Northern Traction Company bid only 100 per cent., and again protested before a bid was received on the ground it was against the purview of the statute that a maximum bid was in contemplation all the time, and he could not receive a bid more than all the gross receipts; the comptroller received the bids, and I was instructed to continue the bidding.

- Q. Stop there and tell me how you reached that conclusion? A. What?
- Q. That 100 per cent. of the gross receipts is all that the law authorizes? A. The law says clearly the contract shall be awarded to the largest percentage per annum.
 - Q. Of what? A. Of its gross receipts.
- Q. Let me give you a hypothetical case; supposing the Broadway line was constructed to the post-office, and they had no franchise down Broadway to the Battery, do you think they would be limited in bidding for the franchise upon the balance of that street to 100 per cent. of what the company should earn on that portion of the street? A. Under the law as it stands.
- Q. Yes? A. Absolutely; I think the wording is very clear; it says the percentage of the gross receipts.
- Q. Of what? A. That road.
- Q. But this runs to the park? A. This was not an extension; this was an independent road, an absolute charter.
- Q. Can the law assume that this company has not other routes and lines in existence or in contemplation? A. If it does the form of the application is different, or if the road has any other independent at the present date the application is made to the

board of aldermen, is made in a different way; you apply for an extension of the route.

- Q. If they had this in contemplation it would not change the application? A. Not in the original application, but it would in the further applications made by it.
- Q. Take your own case, you run to the city line, and then go into another county where this law is inoperative? A. It is another corporation.
- Q. It happens to be here, but supposing it was the same? A. If it was you would apply to the common council; the forms of the application would not be different.
- Q. The common council would not have anything to do with the roads in Westchester county? A. You mean, saying it was the same corporation.
- Q. Yes. A. Then it would be governed by the conditions in the different towns.
 - Q. If the road were not built you could not do that? A. What?
- Q. This would not be an extension of its line; supposing you and I were promoters of a line from Westchester to Harlem; also that the franchise sold at auction; we also contemplating extending that road into Westchester county, providing we get the franchise, and we do get it, agreeing to pay so much per annum, and we continue the road into Westchester county; wouldn't we be obliged to pay it? A. In the first place, I do not think you could do that as the law is at present.
- Q. Then you stood there making bids you did not believe had any force whatever? A. I did in this way; I was instructed to bid after making a declaration that we did not waive any rights; we bid then for the purpose of preventing the franchise being awarded to one of the contestants on an illegal bid.
- Q. It could not be on an illegal bid? A. We contended it could not; we had to face the actualities on what we supposed the conditions were.
- Q. That comes back to the point where you stood and ran this franchise up to 6,975 1-16 per cent., and you did not yourself be-

lieve that any bid over your company's 100 was valid? A. I was instructed to do just what I did.

- Q. You told us what you did? A. Yes.
- Q. You did that, believing it, as a lawyer, that the bid was invalid? A. I did that after protesting against the reception of the bid, and that we waived no rights.
- Q. You actually made a declaration that any bid above you you believed to be illegal? A. Yes.
- Q. When they continued you joined, too? A. On the condition I speak of.
- Q. I do not want to be understood as criticising your course? A. I understand that.
- Q. Do you think your company contemplated constructing any road, 20 miles of road, under an agreement to turn over anything to the city? A. I think, as a business proposition, it would be wiser to do that than forfeit the franchise above; understand it was not a matter of choice with them at all; it was an absolute necessity; then we did not think we were entering into a fair competition; we felt that those who were bidding against us had a great advantage, in that we believed they did represent the Union road, which, under its franchise, could wipe out that bid.
- Q. They must have been in good shape if they were in a position to give more than 6,000 per cent.? A. I felt they could agree to give any percentage whatever, and wipe it out on the following day by consolidation.
- Q. Why could not you have consolidated with your Westchester road and wipe it out? A. We have not got any Huckleberry bill.
- Q. You know there is more than one way to effect a transfer consolidation? A. That would not wipe it out.
 - Q. Supposing it was leased? A. Yes.
- Q. What would you collect your percentage on, the rental? A. Possibly.
 - Q. Or the earnings of the road? A. The net earnings.
- Q. You could not do that? A. We will assume it would be the rental.

- Q. You could practically avoid it? A. No; the court would have the practical supervision of a contract of that kind.
- Q. No; it might adjudge whether it was entered into to evade the statute, and if so, set it aside? A. Yes.
- Q. And wipe out both corporations? A. No; but compel us to stand on the bond.
- Q. But at a fair stand rental of the road it would minimize the amount of money the city would receive under it, if that percentage is taken from the rental? A. That might be.
- Q. Was that the subject of discussion there at all? A. It was not.

Thomas L. Hughes, called and sworn, testified:

- Q. You reside in the city of New York? A. Yes, sir.
- Q. Your occupation is what? A. Lawyer.
- Q. Practicing here in the city? A. Yes.
- Q. You took part in the bidding for the franchise which has been spoken of here by the last two witnesses? A. Yes.
- Q. For whom? A. For the Northern New York City Traction Company.
- Q. That company was organized when? A. I think it was organized some time in September, along about the 12th or 15th.
- Q. A short time before this bidding? A. I believe it was; yes, sir.
- Q. Did you bid under the directions of the officers of that company? A. Yes, sir.
- Q. Who were the officers of that company? A. Henry Seibert is the president, I am secretary, and Mr. Frederick H. Benedict I think is treasurer.
- Q. Who were the promoters of that company, do you know? A. I do not know who the promoters were, unless it was Mr. Seibert, principally.
- Q. Are you substantially interested in the company? A. To the extent of five shares only,

Q. That is for the purpose of qualifying you as a director? A. I do not know; well, no; in good faith.

By Mr. Nixon:

Q. You bought it and paid for it? A. I did not pay in cash.

By Mr. Gleason:

- Q. Where were their offices located? A. Do you mean where they resided?
- Q. Where were their offices located? A. The company was organized in Mr. Lane's office, in the Mutual Life office.

- Q. Your certificate designates some place? A. Yes; Mr. Lane's office.
 - Q. Is that the office of the company? A. Yes.
 - Q. Who is Mr. Lane? A. He is an attorney.
- Q. Did your directors hold the meetings in reference A. At the time of the election of the officers that was discussed; yes, sir.
 - Q. And you were selected to do the bidding? A. Yes, sir.
- Q. How high were you authorized to bid? A. My instructions were general in reference to that; there was no limit spoken of at the time.
- Q. Do you regard that transaction as it was actually carried on, a transaction in good faith to purchase the franchise for the purpose of completing and operating a road under it? A. Do you mean so far as our company was concerned?
- Q. Yes; speaking for your own company? A. Yes; I do not know as the company would ever have carried out this contract on which I bid; I believe that bid which I offered was a legal bid, and the representative of the city, the assistant corporation counsel of the city also considered it a legal bid.
- Q. That is, after you passed 100 per cent.? A. Yes; I do not know what the company would have done with reference to carrying out the contract, or if the franchise had been awarded to them; I do not know whether they would have carried out that or their bonds; it was my judgment at the time to secure the franchise and my bidding was in good faith.

- Q. You went to what? A. Six thousand nine hundred and seventy-five, and I think that was my last bid.
- Q. What was the particular thing that you ran against there that paused you? A. The comptroller said that the office hours were at an end, and that he was going to close the office, and therefore they would take a recess until the following day, when the biddings were adjourned until the injunction papers were served.
- Q. That is the reason they did not go higher? A. It would have gone higher, undoubtedly.

By Mr. Gleason:

Q. Who got the injunction order? A. I understand the Southern Boulevard people.

By Mr. Wade:

Q. That company claimed its bid of 100 per cent. was in good faith? A. Yes, sir.

By Mr. Gleason:

- Q. You are familiar with the proceedings before the comptroller up to that time? A. Yes, sir.
- Q. You examined the right of the Southern Boulevard Company to bid as to its filing its proper bond? A. No; I did not examine the bond prior; I left that for the comptroller, and he made the statement at the opening of the sale that the bond had been filed by the Southern Boulevard Company and Northern New York Traction Company and the People's Company.
- Q. Did you examine the bond to know who was on it? A. No, sir; I never saw it; the comptroller was to pass on the bond.
- Q. You do not know whether the men on your bond or on the Southern Boulevard bond are practically the same? A. Only as I saw it in the paper; I saw some allusion to it in the paper afterward; I know Mr. Seibert and Governor Flower were on our bond.

- Q. Was Governor Flower one of your directors? A. No, sir.
- Q. You have not any idea that your company would have built that road under that condition of things? A. I do not know about that.
- Q. You actually believe, as a lawyer, that your bid of 9,675 per cent. was a valid bid? A. Yes, I do.
- Q. And that if you took in one cent you were obliged to turn over to the city 6,975? A. Yes, I think that is so; if the road was built and it was operated.
- Q. Or one dollar, rather, you would have to put in 69.75? A. That is right.
- Q. Do you think the bonds of a company organized and constructed on that basis would sell well? A. I did not take that into consideration; I should say not at present.
- Q. Even then with the stock at the price you received it, if you are to take a franchise in that way A. I did not think that the company would ratify the bid which I made.
- Q. Then it would forfeit \$50,000? A. Yes, or else get relief from the court in some manner.
- Q. How did you expect to get relief from the court? A. For the reason that the People's Traction Company bid to the amount of 38 and something, 38 12-16, and then they immediately jumped to 100 per cent.; I did not think they acted in good faith when they bid to that amount.
- Q. No matter, the statute, so far as the city is concerned, is a statute for revenue only? A. Yes.
- Q. There is nothing in a statute to make a fellow hitch along 1-16 of a cent at a time? A. I believed that the courts would regulate the matter.
- Q. You believed that the courts would declare the whole thing a farce? A. I did not know but they would; Mr. Breen spoke of our company being a rival company; it seems to me they were the rival company.
- Q. You were both rival companies? A. Yes; but I mean his company not acting in good faith.

- Q. After you got there the effort of each one of you was to prevent the sale to the other? A. That is my belief.
- Q. And if it happened to fall on you you would look for someone to help you let go? A. That's right; I would turn it over to the company.

By Mr. Gleason:

- Q. When was your company organized? A. September 16th, or somewhere in September.
- Q. Mr. Breen's had been organized some time? A. Yes, but we had the right to come in and bid.

By the Chairman:

- Q. Where is your office? A. Thirty-two Nassau street, the Mutual Life Company Association.
- Q. In whose office are you in? A. Lieutenant-Governor Sheehan's.
- Q. Mr. Sheehan appeared here as attorney for the company? A. Yes.

Recess until Wednesday, November 27, 1895, at 10 a.m.

Proceedings of Wednesday, November 27, 1895, at 10 a.m.

The committee convene at the parlors of the Metropole Hotel.

J. G. Affleck called and sworn, testified:

- Q. Do you reside in the city of New York? A. Yonkers.
- Q. Are you engaged in business in the city of New York? A. Yes, sir.
- Q. Are you connected with any surface street railway in the city? A. Yes, sir.
 - Q. What road? A. Ninth Avenue Railroad.
- Q. How is it operated? A. It is operated by the Metropolitan Street Railway Company by horse power.
- Q. How long has it been operated by the Metropolitan road? A. Since April 12, 1892.

- Q. Under a lease? A. Under a lease.
- Q. Extending how long? A. Ninety-nine years.
- Q. How many miles of track in your line? A. Eight miles.
- Q. Single track? A. Single track; 16 miles single track.
- Q. Sixteen? A. Yes, sir.
- Q. Extending where? A. Fulton street and Broadway to One Hundred and Twenty-fifth street and Tenth avenue; running along Tenth avenue and along the Boulevard and Ninth avenue, through Greenwich and Washington streets, and up through Fulton.
- Q. The corporate name of your company is what? A. The Ninth Avenue Railway Company.
- Q. When was it organized? A. The date of the charter, July 29, 1859.
- Q. When did you first become connected with it? A. Eighteen hundred and eighty-one.
- Q. In what capacity then? A. I do not know; director; I was first director and my uncle at that time was treasurer, and I assisted him with his books.
- Q. When were you elected treasurer of the road? A. In 1889, I think.
- Q. And did you continue actively engaged in the business of the road up to the time of its lease? A. Yes, sir.
- Q. What rental does it receive from the Metropolitan road? A. It receives \$48,000 a year for the first five years and \$64,000 a year after that time.
 - Q. Sixty-four thousand dollars after that? A. Yes, sir.
 - Q. Is there anything else? A. Any other income?
 - Q. Yes. A. None.
- Q. Has the road an indebtedness; your company an indebtedness of any kind? A. None at all.
- Q. Entirely free from debt? A. Yes, sir; nothing but the stock.
- Q. What is the amount of the stock? A. I said April 12, 1892, we leased it, and I say March 12, 1892.

- Q. What is the amount of the stock? A. Eight hundred thousand dollars.
- Q. Your lease is 6 per cent. on the capital stock? A. It is not leased at 6 or 8 per cent.
- Q. What? A. It is not leased at 6 or 8 per cent.; it is a lump sum; in case of suits or anything, we would have to pay, and we are not liable.
- Q. That amount is 6 per cent. on your capital stock? A. Yes, that is what it amounts to.
- Q. And after five years it amounts to 8 per cent.? A. Yes, sir.
- Q. Is it contemplated to change that into an electric road? A. I could not say.
 - Q. Or a cable road? A. I could not say.
- Q. For what period of time was your company incorporated? A. I could not answer that question; I think there is no date at all on our charter, or no limit to our charter.
 - Q. Does your company maintain an office now? A. Yes, sir.
- Q. And you make your annual reports to the comptroller? A. To the board of Railroad Commissioners.
- Q. Do you make any report to the Comptroller? A. Yes; but that's done by the company that leases our road; they make their report of their earnings; they operate the road and their reports go to the Comptroller.
- Q. But they can not make a report? A. They pay all taxes on all our capital and everything; that is part of their lease; they pay that in addition to the rental; we get the rental clear.
 - Q. They pay the capital stock tax? A. Yes.
 - Q. And the income tax? A. They do not have that.
- Q. Yes they do; they pay a tax on your gross income? A. Yes, they pay those.
 - Q. You do not have the other one? A. No.
 - Q. They pay your city taxes? A. Yes, sir.
 - Q. And keep up the insurance on the property? A. Yes, sir.
 - Q. So you have no expenditures at all except salaries? A. That

is all; and a small amount of expense for stationery and books and things of that kind.

- Q. Has your company a surplus? A. Of a few thousand dollars.
 - Q. Nothing of importance? A. Oh, no.
- Q. Prior to the lease what dividends were your company paying? A. Four per cent. a year, and 6 per cent. one year, I think.
- Q. Were you connected with the road any time when any portion of the road was being constructed? A. Yes, sir; I was.
- Q. What portion? A. From Sixty-fifth street to One Hundred and Twenty-fifth streets.
 - Q. About what distance? A. That is about 3 miles.
 - Q. It is all double track road, is it? A. Yes, sir.
- Q. About what does the road cost per mile, constructed as it was? A. That I could not tell you, without bringing books to look it up.
- Q. You could not approximate it? A. No, sir; my office being simply treasurer; the superintendent had all that work in his hands; in other words, I have never been actively engaged in the operating department.
- Q. Did your company ever issue any bonds secured by a mort-gage upon the road? A. Yes, sir; they had it on some real estate, and those bonds were paid off, I think, in about 1872; that was before any connection of mine with the company.
- Q. There had been no bonded indebtedness on the road since you became connected with it? A. No, sir.
- Q. How was the 3 miles constructed between Sixty-fifth street and One Hundred and Twenty-fifth street, or wherever it was—out of the surplus earnings? A. Yes, sir.
- Q. Has the stock been increased since you have been connected with the road? A. No, sir.
- Q. What is the stock worth now? A. They quote it at 156; I do not think there has been a sale within a year.
- Q. The fellows do not want to sell it? A. Six per cent., with a prospect of 8, is a good investment, and I suppose they hold on to it.

Q. So that with the actual operations of the road you have nothing to do, and have not had since the lease? A. No, sir; not a thing.

Recess until Wednesday, November 27, 1895, at 10 a.m.

The committee convened at the parlors of the Metropole Hotel, New York city, Wednesday, November 27, 1895, at 10 a.m.

Albert Shaw, called and sworn, testified:

By Mr. Nixon:

Q. Now, if you can give us your ideas on this question bearing on the question of municipal ownership, we would like to have you? A. Gentlemen, I did not come in here to make a speech, and had no thought of being called before this committee until I was spoken to last evening just before I went home, and I have not had a moment's time to consider the matter in any way; I think I prefer to be asked some questions; I do not bring any wisdom here, but any slight knowledge I possess is at the service of this committee.

- Q. Have you given the subject of municipal ownership of surface street railways some consideration? A. I may say that I have looked into the practical workings of street railway systems in foreign cities particularly; I have considerable amount of familiarity with street railways in this country, not as a business man so much as a political economist, and student of public questions and a journalist.
- Q. Have you made that subject something of a study? A. Yes, sir, for a good many years, because those matters have interested me from a public standpoint; I have no theories to exploit, but I have been interested in facts, and I have taken some pains to collect facts; I have business relations that take me abroad frequently, and I improve my opportunities to find how those things are done.

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Q. What foreign cities have you visited where the municipalities owned or operate the street railways? A. I have recently written and published through the Century company of this city, two books, one entitled "Municipal Government in Great Britain," and the other "Municipal Government in Continental Europe," and in both of those books I have embodied information of street railway history in Scottish and English and German and French cities, and some allusions to the big towns out of Germany in Vienna, and Buda Pesth in Hungary, with some allusions to the Italian cities. The only place where public demonstration has been carried to the point of a very important and full demonstrations is the city of Glasgow, I should say, which is the largest commercial town in Great Britain, outside of London, and which has a population now in a very compact form, I should say, approaching 750,000 or 800,000, and if you should bring in their near suburbs so as to bring the whole real population into one corporation you would find about a million people there. Ever since they have had street railways in Glasgow, and their system was first advocated there by George Francis Train - nearly every railway you find in Europe was first proposed by George Francis Train, in 1860. He went over there and advocated it and constructed the first line out of London. He tried to get a system in Glasgow, and a number of other towns. The municipal authority did not like the idea of allowing any other company to have that much control over the surface of the streets. The consequence was, when his company attempted to promote a bill in parliament, that being the method there, the city corporation itself, through the city attorney, and through the regular officials of the municipal corporation, proceeded to London and promoted a bill of their own, and opposed the bill promoted by the private company, and said that if any privilege to construct street railways was going to be granted they preferred to have it conferred directly on the corporation. There is no use of going into the minute history of all that, because it involved several years, but eventually the city itself secured from parliament the extension of its charter powers to the point of having the right to construct its own street railway system, the inten-

tion being, as I recollect it, the explicit terms of the charter requiring, that when the city had constructed the lines it thought desirable, those lines should be leased for operation to a company which might make a favorable proposition. The fact was there had been an understanding arrived at between the city and the private company that wanted the franchise, and so the whole proceeding became an amicable one, and it was understood on all hands and finally by common consent, that the city should own the track, should construct the tracks, and that the operation of the road should be made over to this particular private company upon terms which had already been practically worked out, by negotiation between the city and between this company, and those terms were pretty severe terms; that is, pretty severe for the private company. The city required, in the first place, an interest upon its entire investment, so that the bonds issued to build these tracks should be cared for as to the interest due through a payment made by the company from year to year to meet interest. Then the city required a payment into the sinking fund account going to an amount to fully extinguish the total cost through a period of years graduated as to the operating period. Then a still further fund had to be made by the company, known as the repair and maintenance fund, so under the eye of the city engineer the track should be kept in perfect order and at the end of the franchise period, should be delivered over to the city in perfect order. Then, in addition to that, there was a considerable mileage rental exacted by the city for the use of the streets. So that for some years the company made nothing upon its venture. Street railways were in their infancy then, and the town was compact, but gradually the property developed and new lines built and extended and the use of street railways became more and more familiar to the public and the company reached the point where it made very fair dividends. It was capitalized under the careful English laws which do not permit any stock watering of any kind of company, whether street railway or any other limited commercial corporation. The thing thus went on very satisfactory from these financial standpoints up to the expiration of that first period. If I recollect right, I No. 98.] 1069

have written about all these things, and what I have printed is accurate, and what I say now is general. If I recollect right, that first period was a 20 years period and it expired the first of July, The company had expected, and the city authorities had expected that a new lease would be granted to the same company. But the city authorities, in addition to various other changes, had intended that the company should pay considerably increased sums into the treasury of the city, and desired that these sums be fixed on a sliding basis so the city should have a certain sum guaranteed, and should also be further partaker in further profits, if the earnings should be increased. The negotiations were protracted and then finally fell through, and then the city proposed to take over and to operate the whole plant itself. When that decision was reached public opinion backed the municipal authorities in that decision and permission was obtained from parliament for those additional powers that would enable the municipal government to operate the street railway directly, as they had for many years operated their gas works, and done a good many things which had tested the business capacity of the municipal corporation. Parliament had seen enough of sound business operation in Glasgow to consent to that increase of power. Then it was expected the municipal corporation would buy out the equipment of the retiring company, and the bargain had been reached and a sum agreed on by appraisal and agreement, when an unexpected hitch occurred. The city thought it was right that the company should agree not to operate a buss line or tramway line in competition with the city line, and the company refused to make that a part of the bargain. The city authorities threw up the negotiation and proceeded to buy horses and build cars, and create an operating plant of its own. It did not have a great time to do that, but it did it with great success. I know very well a gentleman who undertook to do that. He had been in charge for a number of years of the cleansing operations of the city, the whole handling and treatment of the domestic refuse, and his department had been buying a great many horses. He was a man of great capacity and very inventive mind. He applied himself to this task of buying

two or three thousand good horses. They intended to change from animal to mechanical power, but they could not change quickly enough so they put in a horse service and built new cars on an improved model, so the new service operated on the first of July, 1894, started off with a great deal of prestige. The old company put on omnibus lines and there was very considerable competition for some time. My advices now are that the omnibus line has not been a success, and municipal operations have been quite a success. They went into operation with a reduction of charges and interesting experiments in the way of very cheap morning and evening fares for workingmen, and some reductions for school children, and weekly tickets and low rates and all that sort of thing. The city is in the hands of very good, solid municipal business men, who were just as well able to make calculations of what they were about as the men who had been managing the street railway system before. The fact is, they were the same class of men coming from the same business circles. Those men when they go into the public service are usually a little past the prime of life, and are able to turn the details of their private business over to their sons and assistants, and usually turn their attentions to public affairs. That class of men are interested in making a success of this scheme in Glasgow, and there seems no doubt as to their ability to do it. Now, that original scheme of Glasgow, of controlling the tracks and not allowing any company to own any part of the street surface is an idea which has had pretty general acceptance, not only in Scotland, but also in England, so you will find a large proportion of the towns England, including Manchester and Birmingham and Leeds, the ownership of the trackage Sheffield municipal. The city itself constructs, or causes to be constructed, the system. The municipal authorities select the streets where roads shall run and they try to plan the whole thing for the general satisfaction and advantage of the whole system for the distribution of the passenger traffic. Then they lease the lines on such terms as they can secure. There is no precise uniformity in methods or any other detail in these cities, but you find that a

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majority of the largest of the commercial towns of England have adopted that plan. It is also true to a limited extent in several small places direct municipal operation is in operation. I believe - Leeds also is going into it. London, until quite recently, has been quite deficient in its central municipal corpora-It has been broken up into parishes with a rather There would not have been any sysantiquated system. tem of municipal government that could have managed a transportation system. The consequence is that street railways have been operated by private companies the same as our street railway The street railway lines are now falling in. don common council, which is a central body now, has devoted itself to acquiring as the franchises expire, the trackage and privileges of the street railway. Several years ago the London common council adopted that policy and announced it. idea then was, I think, to lease the line in order to derive a revenue for the public treasury. I think that was the object. Not so much to secure improved operation as to secure a revenue. The success of Glasgow in operating the lines has inclined the more progressive or more radical men in business administration in London to attempting experimentally operating a line or two. That whole thing, as yet, is not in a position to furnish us anything tangible, because the party who obtained a majority in the common council in the last election is rather opposed to any innova-The Moderates or Conservatives have now a slight majority in the common council, and until the tide turns again it is not likely anything else will be done in the way of change or innova-The rule, I should say, speaking in a general way, in English and Scotch cities, has been to hold all transit companies, street railway companies, down to very strict regulations as to all kinds of details. As to the charges, as to the fares, as to the frequency of the cars, as to the character of the cars, as to every detail of equipment and operation, those things are held pretty strictly under public supervision, public control, for the welfare of the community, and in being looked upon as a quasi-public. servant, and the company is amenable at all points to public con-

That has been the theory and practice of certainly every place outside of London. There things have been somewhat inharmonious. The rule has generally prevailed, also, where, as in many English cities, companies have constructed the track, that at the end of the franchise period, say twenty years, the trackage should be made over to the city without cost, and should become municipal property, or else in a few cases that the property be made over to the city at an apprised valuation. Now, when you go across the channel to the continent you find a great variety of experience. The one thing that would impress anyone that looked into street matters in foreign cities is, that local passenger transit is not so highly developed. not so much of a necessity. The towns are so much compact. many of the population do business on the ground floor and when through go up stairs instead of going out somewheres in the suburbs.

Q. They are not patronized there as they are here? A. No, sir; the consequence is that it is not so gigantic an interest as here; the consequence is that the amount invested in street railways is small as compared with here, and the amount of passengers small as compared with a city of the same size here; you go to Berlin and you find a good system; the system is operated by horses; almost the entire system is under the management of one man; he is a German-American, and is well familiar with this country; he spent a good deal of time at the World's Fair looking into everything in the way of improvements, and he operates the system exceedingly well and in very good understanding with the municipal authorities; he is highly respected by the heads of the municipal government and there is a very good understanding; the charter under which the Berlin street system is one that gives the public a very large measure of control over the system, and the earnings of the company, I should say that the company in the actual invested capital would be just about the earnings you would expect a well managed business to produce; there is no water in any foreign city that I have had any knowledge of; the laws of those countries are very careful not to allow the value of the public assets, the earning

privilege which would accrue from the use of a crowded thoroughfare to get mixed up with the investment—the money they are allowed to earn dividends on is the money they have actually put into the business, and they do not capitalize to the boundless the possibilities of the franchise, as I notice most all American railway companies do.

By Mr. Nixon:

Q. You might say all. A. I might say all.

- Q. We found one that had no water at all; I took it they had no water; they broke. A. The tendency of any company of that kind is to capitalize its earning capabilities, but those things are very carefully guarded against from one end of Europe to the other.
- Q. To go down to the remotest European city in the street railway matter, Buda Pesth, the capital of Hungary. A. There they have the best street railways in the world; they operate them by the Siemens underground system, with beautiful cars, with patent spring fenders, and never have hurt anyone there; I have written to find out but never have heard of it; that company is capitalized for an absurdly small sum for the business they do.
- Q. That is a private company? A. Yes; all street railway lines of the continent of Europe are private companies like our American companies.
- Q. Does not the city of Berlin operate their road? A. No; there are one or two minor systems in Berlin, but practically all the roads are operated by one road; sooner or later they will change to a practical traction of one kind, but it is still a horse railway company, a regular private stock concern; their charter is a very elaborate one and drawn with the greatest care in the interest of the public; as a little random observation I have always noticed with a good deal of amusement and some interest, because I have seen a considerable amount of charter revising and charter granting in western cities, as I was a western newspaper man; in European cities when it came to granting a charter to a street railway system or any other corporation applying, the legal talent

in the interest of the municipal corporation was keener and shrewder and better qualified and had the matter better in hand than the talent employed by the company; the domineering interest is on the side of the municipality, and the fellow likely to get the worst of it is the fellow who applies for the franchise and not the municipal corporation granting it; that is a random observation, but still to me an interesting one; that grows out of certain forms of their municipal organization, as the high salaries paid to the men who are the legal advisers of the municipal corporation and to the great honor attached to holding certain of those positions which make it worth while for very expert corporation lawyers to serve the interests of the community rather than serving the interests of the corporation applying for the franchise; most American franchises in matters of detail are drawn in the interests of the private party; the negotiation proceeds in that way; while in Europe it proceeds the other way, and the fine print clauses are worked in by the municipal authorities, on behalf of the people, so the street railway company feels, after all, it is in the hands of the municipal authorities and it must rely on the good faith of the municipal authorities not to press it, because it is practically in the hands of the municipal authorities as to their detail, as to what it shall charge for fares and as to how many cars it shall operate; it is almost impossible to find any street railway in any European city that would be allowed to carry more than its even complement of passengers; on the other hand, if a sufficient number of cars were not furnished to carry all that wanted to ride, there would be trouble at once; the consequence is, that the cost of equipment relative to the business they do handle in a European city is a considerable greater; it will take a greater number of cars to carry the same number of people, because the public authorities insist that it shall be so; they insist that the street railways in Berlin and Vienna shall be comfortably provided with seats.

Q. Did you notice any difference with the patrons of the roads there than here? A. You mean as to the class of people?

- Q. Well, as to the determination of each one to take the first car that came along, utterly regardless as to how many there were? A. I think there is a little more intensity in our communities here than there.
- Q. Is it not there for the interest of the company to provide all the cars that the patronage of the road requires? A. I should say that would depend upon a good many facts affecting each particular instance; I should say that it might not be in a given community to the financial interest of the road to provide superior facilities if it is going to be able to carry the same number of people with the inferior facilities.
- Q. By consuming longer time to do it? A. If you can pack twice the same number of people in the car who are practically by the circumstances of the case compelled to patronize that line, the temporary profit would be larger than if you amplify your facilities by large investment.
- Q. Do you know of any street railway in a foreign city that runs cars as frequently as they are run in the city of New York? A. No, I do not know; I do not know of any street railways in Europe subjected to anything like the pressure that our street railways are subjected to in our country; I made the remark that as yet European street railways occupy no such position, the population on the average being more compact; the municipal areas being very much smaller.
- Q. Do they prohibit there a person's riding standing? A. Absolutely in almost all cases.
- Q. Supposing a person got on a car and there was no seat, what was his duty; to get off? A. They usually make a leeway of allowing four people to stand on the rear platform; I have been put off many a time because I have happened to be the fifth man that would be obliged to stand.
- Q. Take Broadway at 6 o'clock to-night, and they are running cars every block or so; if that rule prevailed you would be standing there a good while before you got a car? A. I have known women in Paris to stand two hours when they wanted to go four or five blocks; and there exactly so many people are allowed;

you get in at little stations; you step into the station and draw a number, and the conductors, when the car comes along, reads out the numbers, and when your number is called you may board the car, but not until then; there may be one vacant place in the car and 50 people waiting.

Q. That would not answer the New York clamor for rapid transit? A. No; it would lead to violence and bloodshed in New York; I have sometimes said, in my desperation, when I have been nearly crushed to death trying to get home in New York, that I wished I could see what would happen on the introduction of that rule here; it seems the introduction of that rule to America might lead to a huge development of our transit system; certain lines, perhaps, could not greatly increase their facilities at certain hours of the day, but more lines could be built and better equipment provided in some other lines, so I imagine it might be possible for the public to be better accommodated in the morning and evening hours, and that would, of course, require a considerably larger investment on the part of the company; but I always believed the company should make that investment; this is what I have known certain transit companies in New York to do by close observation: I have known them to strain their facilities in the morning and evening hours; they have done their best then with the facilities they possess; of course, everyone would be hanging on straps and platforms; I have also known those same lines, about mid-day, when ladies were going to the shops, to take off a large part of their equipment, so, practically, the same conditions prevailed, still over-crowded, trains running infrequently enough, so the same state existed; laws should provide against that sort of thing.

Q. Do you think municipal ownership in the city of New York would do away with the over-crowding of cars and trains? A. I have never dreampt of advocating municipal ownership in the city of New York; I have never thought of it as a remedy; I do believe, if there is nothing in existing charters to prevent Legislative remedy, that it might be possible to bring the whole business of transit in the city of New York under a better and more

efficient public supervision to the end of giving us some relief here.

- Q. Your idea is that these lines should be operated to a greater extent under municipal control, the municipal authority having more power to give directions and enforce rules that the municipality might establish? A. Yes, it would seem to me so; in saying that I make only a very general observation, because I have never pretended to have any ready-made theories or any readymade remedies for matters of this kind; I think the American cities the country over have been unwise in not valuing more highly the great privileges they have conferred upon these companies; I recognize, on the other hand, the exceptional enterprise of many of the American street railway companies, and the immense advantages our communities derive from such facilities as they have, but I do not believe enterprise would have been checked if municipal treasurers had guarded financial possibilities a little bit more closely; I think these are questions of fact, to be worked out precisely as your commission has been doing, by getting at precisely the kind of facts that you were obtaining from the witness who preceded me; I do not believe in conclusions derivable from the experience of foreign cities, although I have been interested in them; but I never believed any experience derived from them of any applicability to our cities; but they throw some little side lights that are interesting; but conditions differ, and our heads are as clear as anyone's, and we should be able to derive and work out deductions to true conclusions-
- Q. You take the street railway systems in Great Britain that you have seen, and they do not compare very favorably with the street railway systems of this country, and the equipment does not compare very favorably, does it? A. The equipment of horse lines; you must remember they are mostly horse lines; I should say they would compare very favorably with our best horse lines of this country.
- Q. Those are practically out of existence in this country? A. Yes, sir; we have been going through a complete revolution in the last year from New Orleans to St. Paul, and—

- Q. Take those tramways; those that are operated by steam power, and they do not compare very favorably with a wellequipped trolley line? A. No; there are not many of those lines; they are usually suburban lines; but it is perfectly true the revolution we have gone through in the transformation of our system from horse to electric trolley, that they have not effected there, chiefly from reasons of conservatism; their towns are more compact and their streets more narrow, and the trolley is considered more objectionable than we consider it; therefore there is no doubt but what in due course of time, in a very few years to come, they will have greatly improved the mechanical details, the technical part of their street railway systems; meanwhile, I should say, the things they have done on the financial system, the relations between the municipal and street railway corporations, those things have shown great wisdom and knowledge and excellent kind of judgment and business sense and business integrity and foresight that you will not find, if you investigate closely, the relations between municipal authorities and street railway associations in the United States; that is a frank statement of the case, and most any man must agree that it is true; it is that side of the transit system of Europe and not the technical side; not the question of daily operation of the systems so much as the financial relations and the relations of control that exist between the public authorities and the private corporations—
- Q. Now, you take the street railway of Glasgow; if I understand you correctly, the city built it and leased it to the company at certain fixed charges? A. Yes, sir.
- Q. Which, in the period of twenty years, paid the interest upon all the money invested in the construction, and turned it over to the city free from all charges? A. Yes; free from all charges.

By Mr. Nixon:

Q. In the term of twenty years? A. Yes, that is my recollection.

By Mr. Wade:

Q. At the same time giving the company some profit on its operation of the road? A. The company had a very fair average divi-

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dend upon its actual investment, after paying all current expenses; in other words, the company did very well, and the company, besides that, was able, as against the losses on its horses and rolling stock, at the wind up of the concern, the company all the time was writing off from its books its own investment for equipment to protect itself.

- Q. Charging it off? A. Yes, charging it off; so that when the term was up the company was in a perfectly sound and safe condition; in other words, its capital was not in danger of being dissipated.
- Q. It had charged off from time to time until it practically charged off its investment? A. Yes, sir.
- Q. And the city received from it all its investment and interest?

 A. Yes, besides a moderate rental all the time for the use of the street.
- Q. In addition to the interest? A. Yes; there was an interest, sinking fund, maintenance and mileage rental fund; four funds paid in each year.
- Q. The sinking fund was for the purpose of retiring the debt? A. Yes.
- Q. The maintenance fund was used from year to year for maintaining the road? A. Yes; it was a fixed fund, so it would certainly take care of the property.
- Q. That road is patronized largely by the laboring people, is it not? A. Yes, sir.
- Q. The public ways in Great Britain, the country roads, the King's highways, are all macadamized? A. Yes, sir.
- Q. And the wealthier classes use them a great deal for pleasure driving? A. Yes, sir.
- Q. That very system there in Glasgow has really been built up and turned over to the city free from all charges, substantially, by the laboring men of that community, because they have been largely the patrons of the road; is not that correct? A. That is true.
- Q. Would it not have been better for the city and the community that those expenses should have been borne to a certain

extent, at least, by the taxable property of the city and not the whole thing taken out of the laboring classes? A. That is a difficult question and an important one; but I should not like to express an opinion upon it without a good deal more than off-hand consideration; I should hardly think so, in view of what I know of the general circumstances affecting the situation there; the rates were low.

Q. But they are sufficiently high to pay for this entire thing, the interest on the investment, and a good profit for operation in 20 years? A. The whole community patronized the system in about reasonable proportion; that is to say, what you might call the aristocratic few is not a large body in a town like Glasgow, and the mercantile community makes the same kind of use as here.

Q. In European cities does not this system prevail to a much greater extent than here, that the street car as John Ingalls says, "is the poor man's chariot?" A. I should say that might keep a few people out, but it does not affect very much the proportion of the financial patronage the street railways enjoy; that is not true in Berlin and Paris, and not true in the German cities or on the Continent generally; I should say that might be interesting as a social factor, but hardly as a financial factor, because the plain people do constitute the great mass and it is their nickels that contribute to the wealth of any street railway company anywhere.

Q. Let us take, to illustrate that here at home; here is a man living in Harlem, whose circumstances in life are such that he has to work for a living; do you think that any system ought to prevail by which he is to pay night and morning for being carried to and from his work, a sum into the treasury of the city that shall be used in paying the taxes on the property of the Standard Oil Company down town and the World building, and the properties owned by the wealth of the city, and the great corporations; do you think any such system as that ought to prevail? A. I do not think I get the bearing of your question.

Q. Well, sir, here is this man, that is charged five cents to get down town; a portion of that money, if the street railway company is obliged to pay a percentage of its gross recipts into the city, a portion of that five cents goes into the city treasury and that, of course, is utilized for the purposes which I have mentioned; now the city maintains the streets and the millionare can have his four-in-hand out any time and drive anywhere, and for that privilege he does not have to pay anything? A. The logical bearings of these questions, that is, the theoretical logical bearings, are often very different from the practical considerations; in almost all those European systems that question of yours is met by so great a reduction for workingmen in the hours that the workingmen have to travel that it does seem to relieve workingmen from that necessity—that is, reduced fare morning and evening.

By Mr. Nixon:

Q. At what hours? A. I might not be accurate; I should say that system applies in Berlin, and Vienna, I believe; it applies in Glasgow, I know; I should say it applies in most European cities, covering the hours they are going to and from their work; just what those hours are I would rather define in that way that they are so to protect every workingman going to and from his work, but do not cover people traveling other portions of the day, and a good many systems those cheap tickets carry them in cars labeled workingmen's cars.

- Q. That system prevails in certain places in this country? A. Yes; I know it does.
- Q. If you were to put the street railways of this country under municipal control would you not first want to take municipal governments entirely out of politics? A. I should certainly be in no haste to put transit systems under very much what you may call discretionary control; I had reference to charter lines.

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- Q. Yes; I know; but there is an agitation going on to-day that the cities should own and operate all the street railways? own opinion is that we have a great deal to do first before we can reach those questions as practical questions; personally and privately, I have not looked on those questions as practical questions, and my point of view is usually the practical point of view; whatever speculations my mind may indulge as to the ideal thing which we may hope to obtain some time is a very different matter; when a city finds itself face to face with a pracitical question, just as the city of New York did when it came to the question, should it or should it not have a hand in the correction of this new proposed rapid transit system, that is a different mater; there is no theoretical question involved there; it is a question of practical finance and should be met as such; a very large number of our American cities have found themselves, in view of a demand for public street lighting, of either buying street illumination from electric lighting companies or making their own electric light, and very large numbers of American cities for practical financial reasons when they faced the practical problem have found they could put in a little plant and generate electric current and supply their own streets at a good deal less money than they were able to get it from the companies at the time; that is a question of practical finance; it does not involve any theory of the function of government at all; it is a pure, simple question of finance; you have got to light the streets; you have got to provide police and a fire service, and those questions come up in their turn of practical questions, and every community must face the question in its own way.
- Q. There is one more thing I would like to inquire a little further about, and that is in reference to the crowding of cars; is it your observation that that feature is governed largely by the fact whether the traffic is congested at a given point along the line? A. It depends very curiously upon a great many other considerations; let me give you an instance; a most amusing instance is in the city of Paris; the regulations will not, under any circumstances, allow any one of those lumbering big street cars to carry any more than its proper complement; it is a dreadful misdemeanor for the

conductor to allow one more man than the lot; on a rainy night it is an uncomfortable situation when people can not ride; over against that regulation, there is a regulation which exacts from the general company which operates the street car system of Paris a certain tax which is a pretty large tax on each car; the consequence is the tax system makes it an object for the company to limit the number of vehicles; the two principles are always clashing; one public regulation does not allow you to crowd your vehicle, and the other puts a heavy penalty on you if you increase the vehicles; there should be a bonus given to vehicles lying idle in the middle of the day and brought out at night to accommodate the extra pressure; the whole system is ridiculous.

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- Q. Supposing that first restriction were applied to the Brooklyn bridge? A. Against overcrowding?
- Q. Yes; now there is a transportation facility in the control of the two cities. A. Yes.
- Q. That is municipal ownership and I do not know of any place in New York where they crowd cars or trains more than they do there? A. Of course, several things would have happened inevitably, if, from the start, there had been a provision against overcrowding there.
- Q. They would have had to have had another bridge by this time? A. Yes, sir; supply and demand would have demanded more facilities for getting cars, and there would not be that everlasting congestion at that little link.
- Q. But it is there and it is not such a serious inconvenience for a man to stand even if he stands on the platform crossing that bridge? A. It depends on his health and general bodily condition; if an invalid he is liable to be killed.
- Q. Supposing he is in the usual condition a Brooklyner is after having been to New York; you would not apply that rule to that bridge now, would you? A. I should hope I would never be guilty of doing anything absurd.
- Q. Do you think that would be absurd? A. I think it would be, to shut right down on it, because it would result in a hardship and annoyance and not result in an advantage; any regulation of

that kind has got to be made and put into operation in the way to give the least possible annoyance to the public; moreover, to make a regulation of that kind and put it into operation on short notice, would not be dealing, it seems to me, fairly or justly with transportation companies, because if the public is going to change a custom it must allow a reasonable time in which to do it.

- Q. Take the Broadway road here, for instance; now, I suppose they are running the maximum speed they are allowed to run? A. They could not run any faster.
- Q. And they run their cars about as close together as it can be safely done? A. True.
- Q. There is not a chance to increase facilities there, is there, if they are running all the cars they can at as rapid a rate as they are permitted to? A. You can not very greatly increase facilities on that particular line, but the facilities on that particular line have been very greatly increased within a few years—in other words, they have a capacity for carrying more people than they were able to.
- Q. By the construction of parallel lines? A. By the construction of parallel lines, and they are carrying more people —
- Q. The traffic has greatly increased? A. Yes; on that street; of course this city needs about the largest possible improvement of its transit outlets in every direction because now it is such a big city, and because its general business core is so definite, therefore the outlet movement to and from a definite district is so much larger proportionately than any other except, and I hardly except, the central district of London; of course, they have a very much greater outlet in the way of suburban trains on their suburban railroads; then they have a vast number of omnibusses, and their street railways are comparatively unimportant; the omnibusses are more important; the underground railroads are developing as a factor, and then the suburban trains have multiplied enormously.
- Q. The laboring people do not ride in London as they do in New York? A. No; they do not nearly so much; still, the great complicated transit system, when you include all its factors there,

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is very large; still, compared with the population, nothing like New York; there is not any city in the world that has so relatively speaking, so difficult, so important a problem in the development of its transit facilities as the city of New York has; that anyone can say who has studied transit matters anywhere, and that makes it all the more important that any one venturing to express an opinion on the situation here should do it guardedly and not with any dogmatism at all.

- Q. In Paris where you speak of the guard calling out the number, that is a station like our elevated stations here? A. Yes.
- Q. That could not be operated on the street crossings? A. I was only speaking of that system to point out its absurdity; it is absolutely unfitted for such a system here,
- Q. They do not stop on a corner there to take on people as they do here? A. No sir.

Mr. Nixon:

- Q. You would not say, from what your observations have been in foreign cities, that similar conditions existing in cities like New York and Brooklyn, would lead you to advocate the control of transit by a municipal corporation, would you? A. Transit is proportionately a very much bigger thing here, both as a vital interest to the population and also as an investment relatively speaking, as to those cities; it can be handled abroad easier because it is not so paramount a service; it does not involve so much.
- Q. The condition of the control of government, are there differences there from here? A. They are very different, of course, and the amount of capital which the carrying of passengers requires in accordance with what is expected by the community is very much smaller there than here; here transit is much more progressive; it is a very much larger speculative element in it; dividends run more steadily there; the German towns are growing just as fast as the American towns, and lately the suburban lines have more importance; still, here everyone recognizes the general patronage of street cars is very much greater here, and it will be

a number of years before the transit system can be relatively of as much importance there as here.

Q. Have you ever studied the question as to the disposition of a franchise to a transit company, as a basis by which the municipality should receive some return, whether by a low fare or by a percentage above a fixed amount of earnings, or what the city should receive from a corporation in return of their occupancy of a public street? A. European methods vary a good deal; the Paris method in dealing with all those companies, is an old method devised back in the time of the Second Empire, along in the fifties; most of those franchises were arranged and they have adhered to that method; that is, fixed the permanent capitalization; allowing the company to earn a fixed dividend on that fixed capitalization, then to divide half and half above that with the municipal corporation; the municipal corporation becoming an equal partner in that; the French people prefer that; the French people do not like to have the municipal government manage directly these matters; like to have the business operations carried on by private corporations; they hit on that plan; it works very well there; I do not say it would work well anywhere else; they keep a pretty close eye on the corporation, and the books are open to inspection; the books in Germany as well are open to the public officials, so they may know their comparative status at all times; the company pay operating expenses and pay fixed permitted dividend on a certain capitalization which has been permitted to them, and above that the surplus profits are divided in two, one half to the municipal treasury and one-half to the company; in that way the city of Paris gets a pretty large amount of revenue out of a variety of things; not a very large amount out of the street railroads, though.

By Mr. Wade:

Q. All European cities put forth more effort for their treasury than American cities, generally, do they not? A. Yes; that leads me to another important thing in regard to the policy of the German cities; we have been told in this country that German cities

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were conducted on a basis of business socialism; the business men who are running those cities are not intending to run them on municipal socialism; municipal socialism would require that the city ought, in any case, to manage these supplies, regardless of the question of profit, but the German city council is composed of business men who say, here, if we can provide street lights to good advantage and save money for the taxpayer by operating a municipal plant we are going to operate a municipal plant; but if we can do just as well for the taxpayers and community and general interest by chartering a private company, we will do that; you see there is no question with those men of this being a principle of socialism; it is not a question of the functions of government.

- Q. It is simply a question of results? A. It is a question of profitable business; those German towns are in the hands of the taxpayers, because most of them have a three-class election system by which the big taxpayers who pay one-third of the taxes elect one-third of the common council; it is arranged with the heaviest taxpayers at the top, and the little ones at the bottom; columns are added up and where you have the names of the big taxpayers; those individuals constitute for that year the first class, and they have a right to elect one-third of the members of the municipal council, and the next group elect one-third, and then the great mass of people elect one-third; the consequence is you have usually got a municipal council that represents taxpaying interests; and these concerns, whether it is a matter of arranging details of a charter with a street railway company, or removal of garbage, those questions are usually dealt with from the point of view of the financier; now, then, a new motive, and that is the health motive; they are very learned health officers; but the financial motive and the health motive have been the principal factors; the consequence is, that they do a thing or let a thing alone as they think it is good business policy, in their particular great class, as the question comes up.
- Q. In the inception of the organization of these companies, I would like to know, Mr. Shaw, if your observation abroad has been such that you have discovered any difference in the inducement to

capital to invest in those enterprises abroad or at home? A. This thing may be put down as a practical certainty, at least true thus far in the development of local transit companies, in Great Britain, in France, in Germany and in Austria, that there has been no large speculative inducement to capital to go into those things because the franshises have been so arranged that there was practically no chance for the people who have obtained franchises and who have gone into the operation of transit systems, to get very much more than a good dividend on their investment; they have not mysteriously grown rich; there may be men, but I have yet to find one abroad who was particularly richer than by reason of the fact he had got a good dividend on his investment; if his investment was \$100,000 that was still the same, but that might have paid him a good investment enough so his stock was worth more than par, but there was no hope of that investment growing through the value of the earning capacity of the franchise into anything very great because almost all those charters there are rather short, so that the public is able to take them up at the end, and rearrange the terms of them, or else they provide for the contingent dividend of profits and money on a sliding basis when the profits reach a certain point and a larger slice goes into the public treasury.

- Q. Is it not true that there is much more capital seeking investment than here? A. That is true in England, France and Belgium and Holland, but it has not been true until lately in Germany and Austria and Italy; the fact being, most of the gas companies, and a good many of the street railways also in Milan, Eastern and Southern Europe, and places like Frankfort-on-the Main, and Berlin and those places were exploited by English capital; you will find many English companies operating there.
- Q. There is no place there where there are the opportunities for investment like those that exist here? A. No; I should say that our superiority of opportunity is not nearly so great as a few years ago.
- Q. Of course, as our country continues to grow older it will get more like theirs in that respect. A. Yes, generally speaking, what you suggest is true.

- Q. Have you not observed this, in this country, that in many places street railways have been constructed more for the purpose of developing some locality than for actually taking care of the natural transfer or traffic upon the street? A. Absolutely; I know a great many instances.
 - Q. Particularly in smaller towns? A. Yes.
- Q. And where citizens of the town have actually put money into it for the purpose of developing the town or adding some stimulant to the growth of the town? A. In other words, the speculative factor is a very large factor, using the word "speculative" in a good sense.

Mr. Nixon:

Q. That is the claim of all promoters here, that unless you have a speculative matter attached to that, you can not regulate your profits; in other words, to permit the unlimited watering of stock; that you can not tell under those conditions what restrictions to place on them and have them just? A. It does not seem that that follows; I think there should be due recognition of all the elements that enter into the problem in every community, but it seems to me none the less absolutely imperative for the public welfare that these questions to the amount of stock that may be pledged on a particular enterprise which enjoys a public franchise should be carefully determined and defined as a public question — public legislation as a question of charter.

By Mr. Wade:

Q. Do you think it would be wise if the statute were so amended as to require the payment of 100 cents into the treasury of cash for every dollar of stock that is issued in a transportation company? A. Now we are entering upon questions of precise financial organization which I do not pretend to have an opinion about; that is, of any value, and I should prefer not to express crude opinions upon a subject that I am not in my own judgment well qualified to discuss; there may be slight elements of elasticity there, and it has always seemed to me that it was rather necessary to recog-

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nize with some liberality the value of subsequent improvements and that possibly the line should not be drawn with precise rigidity as to original investments; nevertheless, I think it would be pretty safe to hold to that as a general principle.

By Mr. Nixon:

Q. Would it not go without saying that these roads built for the development of territory are built by gentlemen who develop that territory themselves; men do not build railways for the development of other people's territories; they have been misguided when they have done that; ordinarily those corporations who build a street railway for the development of any territory, do it because they are interested in that territory. A. They are interested in that territory or have received some substantial substitutes or guarantees.

That is some consideration? A. Yes.

By Mr. Wade:

Q. You would not give them the right to make the stock entirely of water? A. I should not; no.

By Mr. Nixon:

- Q. And then to increase it as much as they wish to? A. I will say frankly when those questions are up you could easily put on the stand here men whose opinions would be very much more valuable to the committee; my opinion is pretty definite on those subjects, but I do not consider them as of public value; my observations as to certain matters you have asked me about have been perhaps as certain as anyone else's in the country; when you come to these questions of corporation law and capitalization of companies, those are not questions that are in my particular line; I think the public would understand a good many things better if stock watering were prohibited.
- Q. If I understand your view correctly, Mr. Shaw, you are not prepared to-day to say that the municipalities of this country should undertake to own and operate these roads now, but you

would give the municipal governments greater control over their direction, management and operation; maybe I have not got your views just right. A. Very nearly so; I might not say the municipal government; I might say the public in some way; because our municipal governments are rather hit and miss structures in some cases; I should like to see what I call the public interests better protected in these transit matters; I should like to see the public treasury get a considerably larger profit than it has thus far out of their large and substantial revenues derived out of that portion of the public assets which the public contributed and the company does not pay for; the two principal assets consist of the investment of the company and the investment of the public; the investment of the public is in the nature of a good will; I am an editor and manager of a publishing company, and we recognize the great importance of that item of good will; in a transit company the thing the public contributes which is the exclusive right for a term of years to operate the cars on a certain thoroughfare is easily the most important asset, usually larger than the company contributes.

- Q. But it is required now to maintain one-third or more of the entire street that it occupies, and that particular portion is used by the public generally? A. That is an item and an item very easily calculated as to the value of it; if that item is a sufficient compensation then any financier can get at it.
- Q. Having done that, the street railroad having maintained one-third of the street that it occupies, has not the city the municipal government, obtained enough and should not the law then go and direct its attention to controlling and regulating the fares so that the people patronizing that road should receive the lowest rate of fare than they can with an economical management of the road and a fair payment to the capital invested in it? A. That may be true; but it is a question that is certainly open to very careful discussion. The most advanced of the English advocates of the municipal side of these questions go so far as to want fares abolished altogether; but in all these questions as to the right charges for, let us say, water supply, and illumination and all

those things, the practical way seems to be to compromise those two principles, the revenue earning principle and the principle of a low and a generous distribution of the service, and there is better logic for the proposition that you suggest if it is a question of logic, than there is that these things should be exploited or the largest amount of revenue to save taxpayers from paying taxes.

Q. Is it not just as fair to exact from one of the merchants of the city of New York the payment of a certain sum of money for trucking his goods through the public streets that are maintained by the public as it is to impose a burden upon you and I for riding through the streets upon a vehicle that is operated by some transportation company? A. There again you introduce a question that leads to a logical reply rather than as applied to questions of fact, and it is not a question that I care to attempt to discuss more than to say that I recognize fully the point your question involves, and consider it a very interesting and important one, but I do not believe that as a practical matter it is a question that is going to be worked out immediately on those lines.

Q. The old idea of the toll road was to fill the treasury? A. That is very true.

Recess until 2 P. M.

AFTERNOON PROCEEDINGS.

Milton I. Masson, called and sworn, testified:

By Mr. Wade:

- Q. Where do you reside? A. In the city; 109 West Twelfth street.
- Q. Are you connected with any street railroad of the city? A. I am secretary of the Central Crosstown.
- Q. From what point to what point does that extend? A. Twenty-third street to East river, to Christopher, North river, Hoboken ferry, at the foot of Christopher street, North ferry.
- Q. And commencing at the Twenty-third street ferry?

 A. Running through Twenty-third to avenue A, down avenue A,

to Eighteenth, through Eighteenth to Broadway, down Broadway to Fourteenth, through Fourteenth to Seventh avenue, down Seventh avenue to West Eleventh, down Eleventh to West, down West to Christopher to Hoboken ferry; returning over the same route, except from Broadway it goes through Seventeenth instead of Eighteenth; single track.

- Q. A single track road? A. Single track on Seventeenth and Eighteenth streets; double on the other portions.
 - Q. Practically a double track road? A. Yes, sir.
- Q. About what is the distance? A. A little over five miles single track.
 - Q. Operated by horse power? A. Yes, sir.
- Q. How long has it been in operation? A. Since October 19, 1874.
- Q. How long have you been connected with it? A. In different capacities since it started.
 - Q. What official position do you at present hold? A. Secretary.
- Q. And you are actively engaged in the operations of the road? A. Yes, sir.
- Q. And have been how long? A. I have been secretary since 1881.
- Q. Prior to that time what official position, if any? A. Clerk in the office.
- Q. If you will give me the date of the organization of the company again? A. The road was organized March 28, 1874; it commenced operations October 19, 1874.
- Q. When did you first become a stockholder in the road? A. 1881.
 - Q. How many cars do you operate on this line? A. Thirty-five.
- Q. And during what hours of the day are they in operation? A. Of course they run night and day.
- Q. All the time? A. All the time, more or less cars; you know there is a city ordinance compelling them to run cars all night.
- Q. You run less cars after certain hours of the night? A. Yes, sir.

- Q. Going down Broadway you go on the Broadway road? A. On the Broadway tracks; yes, sir.
- Q. What rental do you pay for the use of that track? A. Four hundred dollars a year.
 - Q. Four hundred dollars per year? A. Yes, sir.
 - Q. For all your cars? A. Yes.
- Q. What is the capital stock of your road? A. Six hundred thousand dollars.
- Q. Has it any indebtedness? A. Two hundred and fifty thousand dollars.
 - Q. Is that represented by bonds? A. Yes, sir.
 - Q. Anything else? A. No.
 - Q. You said there were five miles of single track? A. Yes, sir.
 - Q. And your road is about $2\frac{1}{2}$ miles long? A. Yes, sir.
- Q. How do you balance your books there; of course you charge the company with its capital stock of \$600,000? A. Yes.
 - Q. And with the bonded indebtedness? A. Yes.
- Q. Then you balance it by some entries of what character? A. The roadbed just as I found it when I commenced.
 - Q. That is construction account? A. Yes.
 - Q. If you have those figures will you give them? A. Yes.
- Q. You have your company charged with \$600,000 of capital stock? A. That is right.
- Q. And what other charges? A. Two hundred and fifty thousand dollars in bonds.
 - Q. Anything else? A. No.
- Q. How do you balance that account; that is \$850,000? A. There is the \$840,000.
- Q. Where do you get the 40? A. There is the road when it was first organized, with a capital stock of \$600,000; the bonded indebtedness was \$200,000; there was a forty odd thousand on the building, which made it \$840,000.
- Q. Now, how much have you got charged to construction? A. Three hundred and seventy-nine thousand six hundred and sixteen dollars and thirty-two cents; that is the track and roadbed construction.

- Q. What have you got charged to equipment? A. Seventy-eight thousand seven hundred and fifty-three dollars and eighty-seven cents.
- Q. What have you got charged to real estate, if anything? A. One hundred and eighty-one thousand six hundred and twenty-nine dollars and eighty-one cents.
- Q. Now, how do you make up the balance of it? A. There is right of way, \$200,000.
 - Q. How was that paid? A. That I do not know.
- Q. Is that an arbitrary charge, as you understand it? A. That is as I found the books when I took hold, right of way, \$200,000.
- Q. Do you understand that the company ever paid the city anything for the franchise? A. The charter is granted by an act of the Legislature.
- Q. Then there would not be any payment to the city? A. There is a provision in there for 3 per cent. of the gross receipts.
 - Q. Yes, I know; but a gross sum? A. No.
- Q. That charge of \$200,000 for right of way there was carried right along? A. Right along.
- Q. Have you any understanding from the history of the road or the company as to whether that \$200,000 charge is an arbitrary amount to-day on the books? A. No, sir; I could not tell you.
 - Q. Anything about it? A. No, sir.
- Q. Of what does your real estate consist? Depot at Avenue A and Twenty-third street.
- Q. What? A. Avenue A and Twenty-third; Avenue A between Twenty-second and Twenty-third streets.
 - Q. Do you own the land on which it lays? A. Yes, sir.
 - Q. Is it a public street? A. Yes, sir.
- Q. And dedicated by the company? A. Owned by the company, yes; and occupied as a stable for storing horses and cars.
 - Q. You mean the land adjacent to the street? A. Yes.
- Q. You said Avenue A? A. Oh; a building on Avenue A between Twenty-second and Twenty-third streets.
- Q. I understand now; how many feet frontage? A. One hundred and seventy-five and a few inches.

- Q. What is the real estate of the company actually worth? A. I could not state the figure on that.
- Q. What is it assessed at; about what? 'A. Sixty thousand dollars.
 - Q. Sixty thousand dollars? A. Yes, sir.
- Q. How near is that to its fair value? A. That I could not tell; it is according to how they assess it.
 - Q. Of course. A. Well, say one-half of its value, \$120,000.
- Q. One hundred and twenty thousand dollars; do you think that would be a fair market value for the real estate? A. I think so.
- Q. And all the rest of your charges is to be charged up to equipment and roadbed? A. Roadbed and equipment.
- Q. And you have got \$78,000 charged for equipment? A. That is for the horses and cars.
- Q. Does that represent the actual amount invested in the equipment? A. The actual amount invested in equipment; yes.
- Q. Have you charged off anything from year to year on account of the equipment? A. All of our betterments have been paid out of the operating expenses; these figures have not been touched except in one instance, as I think I stated before; our bonded indebtedness was \$200,000, and \$40,000 mortgage, and then in 1881 we bought an adjoining building, which was 24x90, and put up a building, and put in tracks and stable, and so forth, and increased our bonded indebtedness \$10,000 and that makes it \$250,000; then we called in, as I stated here, then we called in our \$240,000 and issued \$250,000, but that building cost more than the \$10,000, and all our changing our cars to two horses and so forth, and increasing our rolling stock, and so forth, has all been paid out of the operating expenses.
- Q. This \$78,853.87 is an item that stood on your books charged to equipment for years? A. Yes, sir.
- Q. So it may or may not represent the fair value of the equipment at the present time? A. No.
- Q. It is not such a fair value to-day A. Not at the present day; no, sir; it has never been changed.

- Q. Taking out the \$78,853.87, and the \$120,000 for the real estate, would give what your books show the road cost; that is correct, is it not? A. Yes, sir.
 - Q. Or \$103,200 a mile of single track? A. Yes.
- Q. Now, has that construction account been changed since you became secretary? A. No, sir.
- Q. What dividends has your road been paying, if any? A. During the year 1883 they paid 6 per cent.; that was the first dividend they paid; we started in 1874, and the first dividend was paid in 1883, of 6 per cent.; since that time we have been paying seven.
 - Q. All the time? A. All the time.
 - Q. And paying all fixed charges? A. All fixed charges.
- Q. What, in your opinion, Mr. Masson, would be the fair cost of your roadbed per mile? A. To renew the roadbed at the present moment?
 - Q. Yes. A. To build the same kind of a road?
- Q. Yes. A. Twelve thousand five hundred dollars to \$13,000 a mile.
 - Q. Of single track? A. No; it is double track.
- Q. No; I want you to figure single track. A. That would be about \$6,500; I have never figured that out myself but we have had those figures known to every one.
- Q. What kind of rail do you use? A. We have the same as all the others; part of it is side-bearing rail and part center-bearing rail.
- Q. The center-bearing rail is a cheap rail, is it not? A. No; no more so than the side-bearing.
- Q. What? A. No more so than the side-bearing or the tram rail, as you may call it.
- Q. What weight is it? A. Sixty pounds; between 50 and 60 pounds.
- Q. I wish you would figure up and tell me how you can get \$6,000 in a mile of single track road? A. I have never figured that up myself, but I have heard those figures so often and I do not give

them as my own; we have never built any road and I never had any occasion to figure it up.

- Q. You see your road consists of ties, rails and spikes. A. And the paving two feet outside of each track.
- Q. You seem to have relaid that in your rebuilding the road? A. Yes; you have to take it up and put down the pavement.
 - Q. That is all there is of it? A. Yes.
 - Q. There is no electrical appliances? A. No.
 - Q. No wiring, bonding or connecting? A. No.
- Q. Do you think \$6,000 would be an outside figure for it? A. I do.
- Q. And still it stands charged on your books at a little over \$130,000? A. Yes.
 - Q. Do you know how that is to be accounted for? A. I do not.
- Q. What are the daily receipts of your road? A. Between \$1,500 and \$1,600.
- Q. That is the average? A. Yes; one moment; I do not want to get that mixed in saying that; you asked for the receipts of the Central Crosstown; when I said \$1,500 I included the Christopher and Tenth Street road which we have leased; the Central Crosstown is about one-half of it; a little less.
 - Q. Seven hundred dollars to \$750 a day? A. Yes, sir.
- Q. You are running how many cars? A. They run between 30 and 35.
- Q. Is this on the leased line also? A. No; this is on the Central Crosstown.
- Q. What are your operating expenses? A. They are run together; the roads are not separated in the operating expenses.
- Q. Do they transfer from one road on to the other? A. Yes; and also with other lines; the Fourth Avenue and Second Avenue; on all our lines that we have we transfer.
 - Q. You do not transfer with the Broadway line? A. No.
- Q. Why not? A. With none of the syndicate roads; we are satisfied to transfer with any road in the city of New York.
- Q. But they do not seem to be willing? A. No; they have not heretofore.

By Mr. Nixon:

Q. What is the basis of division of your transfers? A. An equal division.

By Mr. Wade:

- Q. You divide the fare regardless of the extent of mileage of the road? A. Yes; we transfer on our Central Crosstown road with the Tenth Avenue where we cross Christopher and Tenth street, and we transfer with the Second Avenue and the Fourth Avenue.
- Q. Your road, equipment and real estate, at the prices you have given us here as the fair value, should be about \$260,000? A. Let me understand that question again.
- Q. I say, your road, constructed at the prices you have given us here, \$6,000 per mile for the road, of single track? A. Yes.
- Q. Seventy-nine thousand dollars for the equipment and \$120,000 for the real estate? A. Yes.
 - Q. Amounts to \$259,000? A. Yes.
- Q. If that road were capitalized at that and no bonds issued, and that capital paid for in cash, and you paid a dividend on \$260,000 of 7 per cent., would leave you a surplus in your earnings of something like \$42,000 a year? A. Yes, or make a dividend of 14 per cent. instead of 7.
- Q. Then you could not consume your surplus, then; you are getting a dividend on your actual investment here? A. After we had been in operation nine years.
 - Q. Of about 21 per cent.? A. Yes.
- Q. Just about 21 per cent.; what are your bonds, 5 or 6 per cent. bonds? A. Six per cent.
- Q. Then, that is not far from right, that your net earnings are actually paying 21 per cent. on the cost of your entire property here; what is the stock worth? A. It has not much of it changed hands; but it is quoted from 175 to 190.
- Q. Do you know whether any dividends have ever been declared by your company, any stock dividends? A. No.



- Q. There never has since you have been secretary? A. No, there never has since I have been secretary; the original was \$600,000 and it has not changed.
 - Q. Then it has not been done? A. No.
- Q. That is a pretty large water, that \$600,000 of stock, is it not? A. No, I do not say so; there is \$200,000 of it—
- Q. How much did you pay for that real estate? A. That I could not tell; I have nothing except my figures to go by; it was purchased before I had anything to do with the road.
- Q. I suppose there is some way of ascertaining just what that cost; you have no idea that it cost \$120,000, have you? A. I could not tell you.
- Q. I made that observation by reason of the fact that property has been increasing in value during those years, has it not? A. No, I do not agree with you; I do not think it has materially changed in value.
- Q. You would regard 7 per cent. as a fair return for capital invested in that road, would you not? A. Yes.
- Q. Then if this thing should be put through a squeezer and everything wrung out of it except what legitimately belonged in it, you could either reduce fares or pay into the city treasury, and still have money enough to pay a 7 per cent. dividend on it? A. I do not know about that; it would be hard on the present stockholders.
 - Q. What? A. It would be hard on the present stockholders.
- Q. Yes, I appreciate that, because many of them purchased their stock? A. Innocent stockholders, widows and orphans.
- Q. Do you think the law ought to permit the watering of the stock to that extent by a street railroad company? A. I could not answer that question.
- Q. How; you have got the same; this is the same thing over again; you built your road with the bonds? A. Yes, sir.
- Q. And your stock represented nothing, and the earnings of the road have taken care of both, so that if the promoters of the scheme to-day owned that stock and had continued to own it all the way through? A. Yes.

- Q. They would have a stock worth 175 to 190 for which they paid nothing, and that has been paying a 7 per cent. dividend for fourteen years? A. That's right.
- Q. Now, do you think that the law ought to permit of the organization and operation of a railroad in the public streets in that manner? A. When a man invests his money in an enterprise of that kind, he can not tell; we did not know for some ten years, as I understand, whether they were going to get out at all or not.
- Q. Exactly? A. We had opposition lines there that were run—we have got in Fourteenth street two lines running parallel; that was never known before nor since, and it was for years there before we knew whether we were going to live or be sold out.
- Q. You had everything to gain and nothing to lose, unless you happened to own the bonds? A. Yes.
- Q. Because they were sufficient to take care of construction, if they were sold at par? A. That is very true.
- Q. You see, it does not represent an investment by the stock-holders of the company; it represents an investment by those people who purchased the bonds of your road, and they actually took the chances? A. I can not say what the original stockholders paid for the stock.
- Q. Well, it is perfectly apparent that they did not put the money in; if they paid for it they did not put the money in this road, because since your connection with it all of its betterments have been paid out of the surplus, in addition to paying the dividends and fixed charges? A. Yes, we have not increased our bonded indebtedness or anything on account of construction.
 - Q. Do you declare a dividend? A. Yes.
 - Q. How do you declare your dividends, quarterly? A. Yes.
- Q. That makes it equivalent to about a 73-10 dividend annually? A. Yes.
- Q. What taxes do you pay upon that capital stock? A. Well, up to within the last two years the value of it was fixed by the tax commissioners; since that time we have paid but little on the capital stock.

- Q. You make a report annually to the Comptroller of the State?

 A. To the Comptroller of the State.
- Q. And you pay a capital stock tax there? A. That is a regular dividend tax.
- Q. Yes, I know? A. We pay one-fourth of 1 per cent.; one-fourth mill for every one per cent. of dividend; that is what we call our dividend tax.
- Q. It amounts to what? A. It is \$2,350 a year for the two roads.

(Witness makes a computation.)

It is about \$1,200 on the Central Crosstown.

- Q. Two per cent. on the capital stock? A. We pay \$1,050 on the Central Crosstown and \$1,300 on the Christopher and Tenth street.
- Q. That is on your gross earnings, is it not? A. No, sir; that is on the dividend; we also pay to the State—
- Q. Do you own the stock of that road? A. No; but we assume all indebtedness and pay all taxes.
 - Q. How much track is there in that line? A. About $4\frac{1}{2}$ miles.
 - Q. What rental do you pay? A. Eight per cent.
- Q. On what? A. Eight per cent. on a capital stock of \$650,000 and interest on the bonded debt.
- Q. That has got 4 miles of track? A. Four and one-half miles of track.
- Q. Six hundred and fifty thousand dollars, did you say? A. Yes.
- Q. How much bonded indebtedness? A. Two hundred and ten thousand dollars.
 - Q. Six per cent.? A. No; 7, 6, 5 and $4\frac{1}{2}$.
- Q. The 7 is on what? A. One hundred thousand dollars at 7, \$80,000 at 5, \$30,000 at $4\frac{1}{2}$; I do not think there is any 6 per cent.
- Q. That makes \$1,235 a year; hold on; it is more than that; \$12,350 a year? A. I can give you the exact figures.

(Witness refers to memorandum.)

Interest on the Christopher line, six months, \$5,650; that makes it \$11,300.

- Q. The city tax on that amounts to what per year? A. On the gross receipts?
- Q. We have been talking about State taxes? A. The city tax on what; on our stock?
- Q. No; on this road that you lease? A. We pay 3 per cent. on our gross receipts to the city.
- Q. If you have got it all together, give that? A. But this includes the one-half per cent. on the gross receipts to the State.
- Q. Yes. A. And the \$1,300 that is paid to the State on dividends; by deducting that we have \$9,500.
- Q. Putting it all together you have what? A. Eleven thousand one hundred and eighty-five dollars and sixty-six cents.
 - Q. That is the total taxes on this leased line? A. Yes.
- Q. Do you pay insurance on any of that property? A. Yes, sir.
- Q. What is that? A. About \$1,835; we have the Christopher street depot and ours, and I have them here together, and they are practically the same.
- Q. What were your net earnings upon that leased line for the last year? A. Those are together; our operating expenses are together and our offices are together.
 - Q. In both lines? A. Our net earnings?
- Q. Yes? A. Our net earnings before we deduct our betterments were \$64,000.
 - Q. Both lines? A. Yes.
- Q. That is after paying all fixed charges? A. After paying all fixed charges.
- Q. Under your net earnings above operating expenses and salaries A. Let me understand; net earnings from operations?
 - Q. You have given fixed charges? A. Yes.
- Q. I want your net receipts above operating expenses, including salaries? A. One hundred and sixty-three thousand eight hundred and twenty-three dollars and eleven cents for both roads.
- Q. And out of that is deducted the fixed charges for the leased lines, \$76,320? A. Yes.

- Q. And your fixed charges on the line that you own, the interest on your bonds, and taxes and insurance? A. Yes.
- Q. What do they amount to? A. The insurance goes in the operating expenses.
- Q. Omit that? A. I have them right here; the rent of the other road \$77,253; there is a little item of \$1,400 here paid for stationery and salary of clerks; I think you have \$76,323.
- Q. I have your insurance in there all together, \$1,800? A. Seventy-seven thousand two hundred and fifty-three dollars is the total rental of that leased road.
- Q. What are the fixed charges on your road with insurance and taxes? A. Twenty-six thousand nine hundred and ten dollars and sixty-six cents.
 - Q. Then you pay a dividend of \$42,000? A. Yes.
- Q. And still have a suprlus of about \$17,000? A. Eighteen thousand dollars.
- Q. To put into betterments? A. Yes sir; which we did put into betterments; you said \$17,000; really it is \$22,000, and then we put into betterments \$18,000 of the \$22,000; we have got another item of income from other sources of \$500.
- Q. What is that? A. Advertising and rent of buildings; we have a building.
- Q. Those items I did not have; your fare is a five cent fare? A. Yes, sir.
 - Q. I think that is all.

Recess until Friday, November 28, 1895.

The committee convene at the parlors of the Hotel Metropole, Friday, November 29, 1895, at 10 a.m.

Albert Shaw, recalled, testified:

By Mr. Wade:

Q. Mr. Shaw, how much time have you spent abroad in foreign cities? A. I have been abroad a number of different times and I

imagine altogether, I have spent aggregating my little trips and investigations in these matters, about two years and a little more of my life looking into these things.

- Q. And while doing so I judge from what little I know of the two books you published you have made the subject of municipal •government abroad something of a study? A. Yes, sir.
 - Q. Looking into the various features of municipal government in Great Britain and the continent? A. Yes, sir, on rather broad, general lines; I was appointed lecturer once in Cornell University in this State, and lectured at the Johns Hopkins University anl I have been compelled to talk a good deal about those matters.
 - Q. And I suppose there, as here, you found various conditions in the different cities, one of which may be taken care of in one manner and another which requires something different, so far as the transportation of people is concerned? A. You do not find uniform conditions.
- Q. Take the city of New York, its business is concentrated in a very small compass? A. Yes; I suppose there is not only a greater congestion of population in a certain part of New York than any other part of the world, but a very much greater congestion of business interests; if you take what is known as the general business districts of London, although certain kinds are concentrated in London, you have a center that extends a much greater distance along the north bank of the Thames all the way from Westminister to the Tower of London; and you go to Paris and it is hard to locate the business center of Paris, because they seem to be doing business on the ground floor of the whole town and people seem to be living upstairs over their business, as a general rule; of course, where you have a condition of things which exists in Paris, your problem of transportation of passengers to and from business becomes a very different process, because the proportion of people who are to be removed to where they do business is comparatively small, and in general, while Paris is an extreme type of a big town without an absolute business core, yet that condition is generally prevalent in Europe, with the condition you find in New York and Chicago and various other of our American

cities where the whole tendency is to concentrate business in a compact area and then distribute residental districts over a pretty large territory which means a comparatively large proportion of your population must be transported to and from their business.

- Q. Can you tell us about the number of people that are brought into the city of New York and taken out daily by all kinds of transportation companies, including the bridge? A. It is an exceedingly difficult matter to get at, without some very careful computations; I should say there must be a number of practical men engaged in the transportation business in New York who can give figures more valuable than anyone else could give; certainly the number of people transported here is stupendous, and in proportion to the population is far greater than anywhere else, I should say.
- Q. I have heard it said that a million people come into the city and go out daily? A. By which you mean are transported towards the center and away from the center?
- Q. Yes? A. I should not be surprised if that were somewhere near true.
- Q. While visiting the city of London did you make some observations and inspection of their underground railway system or systems? A. I frequently patronized the underground roads of London, and I have been something of a student of their history and of their method and management.
- Q. Tell us the result of your study of those lines? A. The original underground lines in London were not constructed so much to take people from their work to their homes as they were to connect the series of great railway terminals of the different great railway systems, and you find a large proportion of the people in the morning or evening who are patronizing the old Inner Circle particularly, are people who are going from their place of business to the big railroad stations where they take their suburban train to go into the country where they live; so it makes simply a link. The Outer Circle which covers a strip further north and further west, does carry a great number of passengers who live in the Kensington District and a little beyond, from the heart

of the city out to the north end and the northwest where they live. Those underground roads, of course, were constructed at a time when electric transit had not been developed at all, and they are antiquated in their methods, and the train is usually filled with smoke and gas and cinders, and the underground lines are very badly ventilated and it is rather a severe ordeal as, perhaps, you know, to be compelled to patronize that old fashioned underground road, and if one were to consider that that was a criterion and the final and best thing to be devised for underground transit it would certainly commend itself very little to other cities that were considering the problem of transportation of local passengers.

Q. That old system, Mr. Shaw, do you consider it would compare very favorably with our elevated system here? A. Only in one regard, that you can usually get a seat, and in the second regard, that it is more truly rapid transit; it makes considerably better time; the stations are not so near together, and the pressure on its facilities by virtue of the fact that it does not get anything like so heavy a business, does not tax it to such an extent as our elevated roads are taxed; it is able to operate its trains with less difficulty to itself; it gives a pretty quick service and the trains are pretty well filled at certain hours morning and evening, but there is no such pressure on the accommodations on those underground lines as you find here; for a long time these lines were not financially successful; it is a question whether they have ever been successful, when you consider the financial problem in all its bearings; it has been difficult to manage their financial problems; when you come to the new underground railroad in London, the South London road, which is not a circle like the other roads, but a direct line, which starts from a convenient point pretty near the center of London, only a little ways from the Royal Exchange Bank of London, and goes southward, under the Thames, and straight on down, penetrating that great South London district for several miles, with some proposed spur lines and branch lines towards the end, that system, from the technical point of view, point of view of investment and point of view of

operation, is an immense improvement; a cross-section of it would look like a double-barreled, old-fashioned shot gun; there are two tunnels, and they are round, and they are small, and the idea is that a train shall pretty nearly fill the tunnel, so that the motion of the train gives you a natural ventilation; that is to say, the disturbance of the air in the tunnel produces a vacuum behind the train and draws in fresh air from above; it is operated with storage electricity; the cars are lighted with electric lights, and have been from the start, and are exceedingly comfortable; the time that the trains make is very good; you have real rapid transit, and all the stations are served with very large elevators; this road passes at a considerable depth underneath sewer-pipes and everything else, and at a safe distance beneath the river Thames, and you are a considerable ways below the street surface; but there are large elevators, which seem to be successfully operated, and saves the passengers going down on flights of stairs or going up; I have been very favorably impressed with that line, and passengers who are living off in those South London districts have found the line exceedingly convenient and infinitely superior to anything accessible previously; many of them had been before obliged to patronize the omnibus lines; I think from every point of view, financially and technically, this system is considered a success; they have another line under construction, I believe, that is to go across London in another direction, that is not completed yet; it is to go right under the heart of the business section of London, going directly north, intersecting the inner circle of the old Metropolitan.

Q. The fares that they charge there, is it simply one fare to any point you wish to go to? A. No, sir; their fares are practically by the mile; so much from station to station, based upon some scheme of a mileage rate; that is true on the new line; it is true on both systems of the old underground; if you are a casual passenger you buy your ticket at such and such a station; you buy it at the ticket-office window, just as you would on one of our regular suburban trains; not at all as on our elevated; our elevated system is much more convenient in that regard;

and I am firmly of the opinion that our American system, that is, within reasonable bounds of a uniform fare, is very much better than the system you find in most European systems of a graduated fare, based on the distance; in most European cities now, they are gradually introducing what they call the trip; you have your graduated system based on mileage, but at the same time between central points, particularly on the workingmen's cars, you have perhaps, within certain pretty liberal lines, you have a company ride fixed, and a man's fare is a paying between any two points, between two points, perhaps, that represent pretty near the length of a line; so the tendency is, gradually, in Europe, I think, towards our system of fares.

- Q. You spoke about two tunnels; the cross section; the trains run out in one of those and back in the other? A. Yes, sir; and at their stations both tunnels come into a common, large chamber.
- Q. Do you know about the cost of that road? A. The cost of construction?
- Q. Yes. A. It is a matter I have not looked into for some little time, and I am not able to state anything that would be intelligible or accurate on that subject; it was expensive.
- Q. This is tunneled practically the entire distance? A. Yes, sir; it is tunneled the entire distance; of course, those London streets are such that it would have been almost impossible to have secured direct lines through the streets, and a direct elevated line in London; you have substantially what is elevated trains on the big railway companies, because their tracks are on viaducts through the town; there they must own the right of way; they have purchased their right of way through property, and bridged streets where they cross streets; when you compare the expense of getting in and out that way with the expense of tunneling, I am sure I do not know, but I imagine it may not be greatly different in the end.
- Q. About how far below the surface is this tunnel? A. It differs greatly, according to the topography; I would not like to give an average, because it would only be a guess now.

- Q. At these stations do they have stairways leading down? A. They have stairways also; but they have elevators; there is always a stairway by the side of it.
- Q. Is that constructed under the street generally, or does it go regardless of streets? A. It goes regardless of streets, the tunnel does; at the same time the stations naturally are placed with access to a street; in other words, streets are frequent enough so that you are either at very frequent points passing under a street, or lengthwise with a street, or crossing a street, so it is easy enough to place the stations at convenient street intersections.
- Q. Do you know how they acquire the right of way under private property? A. I am practically sure that in the construction of that particular underground road, I do not know how it was with the old Metropolitan, but in the construction of that new road I do not think private owners were consulted in any wise; I think the matter was entirely one of Parliamentary grant; a private bill had to be promoted in Parliament, and the whole explanation of the construction of this road would come up as is usual in Parliament, where the charter of a railroad is to be granted, and the whole thing is heard pro and con before a Parliamentary committee, and the report thrashed out, and Parliament, in full session, always accepts the report of the committee; and in this particular case, as in most cases of that kind, I think that Parliament was competent to give full power; I think it was not considered that private property was referred to: I am only speaking from recollection, and not from any sure knowledge I have on that point; they are very conservative in England with regard to the protection of private interests, and if private interests were directly damaged, I suppose a reasonable compensation was made; if that tunnel went low enough, there was probably no interference with the foundation of buildings.
- Q. Under our system of government, and our titles to land, it would be an invasion of the property rights of property owners, no matter how far down it went? A. I think in England that construction of an underground railroad would be considered

when Parliament had once passed on the propriety and general necessity of granting the charter would be considered in the light of a public work, like the construction of a main sewer tunnel, in which the public right was paramount.

- Q. So it would be here, but we would have to make compensation? A. Yes, compensation for actual interference or damage; I can only say that I am not aware that that question came up in a serious manner in connection with the construction of this road; it may have come up in an incidental way, but I think their obtaining their right of way privilege was not practically found to be a very difficult matter when they once got their charter.
- Q. You know there is and has been in this city, a good deal of clamor and agitation for rapid transit, commencing way back of the construction of the elevated roads and it still continues; the transit is not sufficiently rapid yet to accommodate the people, and as the business of the city grows it is pressing harder all the while, and various propositions come to the Legislature for legislation on this subject from year to year, and for that reason, if you have got in your mind a system worked out that you think would be most beneficial to the city of New York, I wish you would give it to us? A. I do not think that I am qualified to throw any valuable light on that subject; I have some impressions that have grown up by observation of the situation here, and also by observation of the remedies which people in other cities seem to be endeavoring to apply to conditions not altogether similar, but somewhat analagous, and I have found that every large metropolis, pretty much now, in the world, has seemed to consider that a tremendous suburban development is inevitable, for the next few generations, and the complex system of rapid transit is going to be necessary to take care of the daily inflow and outflow of passengers; I have never seen the matter discussed in this country, but they have just laid down the lines of a new rapid transit system in Vienna; they are able there, because the government exercises certain powers over municipal affairs and can make long plans, and they have laid down a system of rapid transit and have superimposed it on the existing system which they propose to

work out in the next eight or ten years; some of this is to be constructed within a year or two, and certain lines to be constructed by the end of eight, and some designated a year or two earlier, and others in subsequent years; I notice that they have considered there for part of that system, electric underground lines will be necessary in the heart of the town; some of their new streets and avenues are broad, but most of their streets and avenues are narrow, and they are of the opinion that the massing of the business population in the heart of the city core as it now is, and greater as they expected it to be, will be a tremendous pressure on the business thoroughfares, and the only way to relieve that congestion at all times is to provide for a sort of safety valve by handling a portion of that business by underground lines; even in the little city of Buda Pesth, that is growing fast, but has not a million of people yet, where I said, day before yesterday, they have devised an excellent system of electric trolly with propulsion under the track on the Simen's-Hasky plan, they are proposing to construct an underground line and wish to construct it this year; they have two main lines of transit in Buda Pesth; one is the old horse-car company operating many lines and controlling practically all the horse-car lines in the town, and then the comparatively new electric system on the boulevards and longer routes, and those two companies have united amicably to obtain from the public authorities a charter for an underground road in the heart of the city underneath and following the lines of the handsomest radial avenues going out into the residence part of the town; they seem to think there in that one direction where population is likely to go and where is likely to be the most demand for a rapid transit line that an underground line very greatly improved in its details they are up to the latest things in engineering details — with electric propulsion and electric light and elevator system, and ventilation would be the desirable thing; that seems to be the conclusion they have reached in Vienna, as I have stated, and they have talked about that thing a great deal in Berlin without having accomplished anything yet; they have got a certain kind of oldfashioned rapid transit in Berlin to a limited extent in their Staat Band, which is an elevated road on a masonry viaduct, really a military road to get troops quicker across Berlin; and then a ringband which is operated in connection with it; they are talking about it without having arrived at definite conclusions in regard to the necessity of some underground electric road; now, in Paris, they have been for several years discussing this question of what they call metropolitan transit with a great deal of interest; the Parisian periodicals have been full of articles on the subject, and a great many plans have been made, and the matter has been before the municipal council of Paris constantly for five or six years, and the big railroad companies known as the Northern Railway System of France has interested itself in the matter, and has made definite proposals to construct the system if the government would guarantee bonds to a certain extent; that is, as if the New York Central railroad proposed to construct certain underground lines for New York city under the details they might propose; it looked a year or two ago as though this Northern Railway System would be adopted in Paris, and I really thought they were going to construct a system of underground lines in Paris; the whole thing was mapped out; there was to be a circular line following the inner boulevards of Paris and crossing the Seine, and to serve South Paris a little and swinging around the main inner part of Paris and then there were to be several radial lines leading out into suburban directions and those radials were to be increased as demand called for it; that was the system advised by the best engineering talent in Paris; the matter has been discussed a great deal over there; the relative merits of the undergrund and surface and elevated roads has been discussed very largely, and interestingly, by the Paris engineers; there are many accomplished engineers in Paris who prefer an elevated system, and would like to see an elevated system on the New York and Brooklyn plans, with some improvement that later traction inventions will permit; I think the proponderance of the political and engineering talent in Paris is in favor of an underground inner circuit and of a few radials branching out from that inner circuit, with perhaps two lines at right angles crossing right under the heart of the town; that seems to be the outline of a system that most people are in favor of there; I think the reason they have not taken definite steps towards the accomplishment is merely financial; now, the matter is under discussion, in view of their great exposition of the year 1900, and also in view of their removing the outer circuit of fortifications and annexing the new suburbs lying outside, and making the tremendous new Paris just as in 1859 and 1860 the limits of Paris were greatly extended and a tremendous series of new public works were inaugurated; they seem now to desire to see if they can solve the financial part of their problem; they seem to be desirous to branch out; I think they have in mind some underground electric lines.

Q. Those would require constructed on that plan, simply two roads running at right angles; they would require simply some surface road leading to them, or underground road leading to them, and feeders? A. They would only consider those underground roads were only a part of the rapid transit system, and that they would by no means supercede existing transit systems and existing transit systems would be needed and would need to be constantly improved, and there would be business for all; now, when one comes to New York and sees how much larger the transit problem is here, how much greater the pressure is, how much larger the proportionate population that has to be transported here — I say I bring no pretense of wisdom to bear on this subject — it seems to me there is room for almost every kind of rapid transit system that can be introduced, and that there is hardly sufficient room for either a surface or elevated system in New York which could cope with the problem, and that an underground trunk line, proceeding north on Manhattan Island was getting to be a practical necessity as a relief; it has never seemed to me that it could in any wise supercede existing systems or that it could cripple their prospects financially, or that it should stand in their way after being developed and improved; it has never seemed to me that the construction of an underground system ought to interfere with the reasonable opportunity to the elevated road to improve their trackage and their surface to the utmost, because

I have formed the opinion that the elevated roads are a great and a permanent benefit to New York, and that the utmost improvement of their service would be consistent with the opinion that they could not take care of the great prospective business, and that a modern well-built trunk line would not hurt the elevated and would greatly relieve pressure and would help to take care of that future growth of area all anticipate here; we see how population has grown in New York in the past few years; we have been given the impression, taking the last 10 or 15 years, that western cities have been growing enormously, but after all, no place is growing so certainly and surely as New York; no place in the country, and it seems to me the part of practical wisdom to encourage almost every form of transit development in this place.

- Q. Well, of course, the element of cost would come up on the construction of such a line must be considered in considering this problem? A. If they can stand the cost of underground lines which they have thought out soberly and carefully in European cities, where patronage is not likely to be so great as it is here, it would seem by rule of the thumb, that there would not be any mistake in making an investment of that kind here; when it comes down to practical details, I am not a practical man, and my opinions, as I said before, would not be valuable; it would seem to one who just studied those things from the public point of view, that almost anything in the way of an investment, if it were properly made under careful and competent engineering direction, and money honestly and wisely expended, would earn a sufficient return on the capital here; in other words, if there is any place in the world where an underground line in view of its great expense, that would prove likely to repay its investment I should say it was right here
- Q. Well, there is a tendency all the time, particularly in the down-town districts of New York, and, in fact, all over it, to construct these business blocks higher and higher, and the result of that is to still further concentrate business, and that must congest the street traffic? A. It would seem so; there is also a very strong and noticeable tendency here, as well as in every

other metropolitan city of the world, as transit does tend to distribute the population over an increased area; I have watched the census very carefully for five or ten years in foreign cities. I have not been satisfied with how much the city grows, but I have noticed how it is distributed; I have noticed the falling off that London shows in all the inner parishes and districts, and the outer ones, some of them, have grown in the last few years, 50 to 75 and 100 per cent., and the inner circle, White Chapel, Westminster, and all those central districts have fallen off sharply; the same thing is correspondingly true in Berlin; there the last two censuses show a remarkable falling off-in a central district, where 1,015, or 120 families, have gone out of a 1,000, and the district has had that much less population; and that thing is happening in our oldest and largest American cities; there is no growth in the inner one-half million, or in the inner million; on the contrary, if you mark an area which contained the last ten or fifteen years a million, there is no growth there; and, on the contrary, it is declining; business houses are taking the residence streets, and population is going out; and population soon finds a long ride costs practically no more than a short ride, and the tendency is to go still further out; that simply means a larger and larger proportion of that population has got to be transported.

Q. Increasing all the while the necessity for more rapid transit? A. Yes, sir; increasing all the while the necessity of what they call in European cities a metropolitan system of rapid transit, as distinguished between ordinary systems of street transit; they consider omnibusses and cabs and horse cars and those things constituting the ordinary system of street transit, and that there needs to be superimposed on that the metropolitan system; in other words, the number of people who want long rides increases constantly; now, I live 25 miles from my office, and there are many thousands that are doing that here, and that is increasing here all the time, and that is true here and in all the big centers; consequently, the demand is increasing with exceeding rapidity; increasing much faster than the population; in other words,

while the tendency of our time is the diffusion of population, in the cities is much greater than the growth in the towns; the suburban tendency is a more rapid tendency, and is more characteristic of this particular decade than the tendency to the growth of the cities as against the country.

- Q. They are seeking, on the Ninth Avenue road here, to lay a third track, and have laid it part of the distance, have they not? A. Yes.
- Q. And upon that it is proposed to run a fast through train; would that relieve much the upper districts? A. Now, you have raised a question of practical operation, which a practical railroad man could answer, as, of course, I could not; any gentleman, one who has lived as long as I have lived up that line, patronizing it—I'do not live in that direction now, but I have lived in that direction—patronizing that system from day to day, why, any citizen would see the great desirability of as many express trains as possible to relieve pressure on trains that stop from station to station; of course, you must have trackage to do that; I personally firmly believe in the necessity of an under-ground system for New York, but I also believe at the same time in the necessity for increased trackage facilities for the elevated systems; it seems to me two things are entirely consistent; I am speaking not in regard to privileges to corporations, but only as to facilities for the convenient transportation of the public.
- Q. You believe that this is a problem that can be solved, and furnish the suburban districts of New York with means of rapid transit that will meet the demand? A. I absolutely do; I think its solution is certainly feasible, from the engineering point of view, and I have always believed that the thing was feasible and practical from the financial point of view; it seems to me, although you have a big investment to make, you have a big business after you have made the investment.

By Mr. Nixon:

Q. Have you ever made a study of the taxation of the franchises in Paris; as I understand, all municipal franchises are taxed

there; I have seen a statement in the message Governor Flower sent to the Legislature in 1892; in that mssage was the following statement: "During the last ten years the gas company of Paris has paid into the treasury of that city \$40,000,000, besides lighting the streets and public buildings at cost, and the annual revenues to the city from railroads, gas, water, cab and other companies which enjoy public privileges, vary from \$6,000,000 to \$8,000,000?" A. Governor Flower collected those figures from articles of mine I had just written for the Century Magazine.

- Q. He did not give you credit? A. I believe he does; he did not use a single figure that he did not take from that article; in a book I have just published I go into those things with a great deal more detail than I did in the article.
- Q. I will show you that paper; there is no quotation there? A. The files of the Century Magazine are always accessible if anyone cares to make the comparison; they will find the article of mine which appeared a little before Governor Flower wrote this message, contained precisely those figures, and I have figured it out in such a way that no one could have given the precise figures I gave, because I might have been mistaken; I made certain round figures by computations of my own, and the Governor used those figures; they were accurate enough for practical purposes; there was no necessity of the Governor stating where he obtained the facts.
- Q. He sent that message in relation to the taxation of railway franchises by municipalities, and in a bill he had signed just previous to that time, known as the Huckleberry Bill, he added to that that when the earning capacity of the road was \$1,700 a day they should pay 1 per cent., and with each multiple of \$1,700 they pay an additional 1 per cent., giving that as his idea; did you ever notice the Cantor Act with reference to the sale of municipal franchises? A. Not with sufficient care to give an opinion; I have noticed the matter in the newspapers as any other citizen.
- Q. Are you familiar with the matter of granting ferry franchises between New York and Brooklyn and other districts? A. Not to have investigated it; I am dependent on it as it appears in the newspapers; I rely on the reporters for all those things.

- Q. Those franchises are sold at ten years? A. Yes.
- Q. And at the end of ten years proposals are made and they are sold to the highest bidder? A. Yes.
- Q. What would you think of the sale of railway franchises in that same manner? A. I was talking with a New Orleans lawyer of great experience on that question the other day; they have just sold one franchise there for \$600,000 or \$700,000 cash—a street railway franchise; they have sold an extension; it is a long extension; they have been electrifying their whole system down there, and one of the companies, which had absorbed most of the old railroad franchises, wanted a solid basis upon which to make its investments for exchange from mule power to electricity, and was obliged to get an extension of its franchise in order to market its bonds satisfactorily; its franchises, by the way, were not to expire for twelve or fifteen years, but it got the extension of its franchises now to extend it ten or fifteen years hence for a long period of years for \$600,000 or \$700,000; looked at in one way that was not a very large sum to be paid, but you must remember that that sum put on compound interest would about double by the time the existing franchises would expire, ten to fourteen years hence; so it might be said, if you chose to figure it that way, it represented a million and a quarter at the expiration of the franchise; meanwhile, the citizens of the town and property holders are enormously benefited by the expenditures of the company by changing from mule to electric power: they have a very fine system in operation there, and the streets have been greatly improved by the co-operation of the company and the expenditures of the company; now, the city needed some improved public works, some improved drainage, and this sum they have taken and applied to the creation of a new drainage system, so the community, as a whole, is going to be exceedingly well served; and as I look at that concrete case there, and I have talked it over with citizens there, I think the town there is really better off to sell that franchise right out, never having any bother over the attempt to adjust the proportion of interest by means of sliding scales or profit-sharing contingent upon

earnings, and all that, in the future, and that the receipt in advance of this definite, fixed sum, which the city had in its hands, and which the city could use for public purposes, was a better system than any of those systems that you now find abroad; the whole organization of municipal government is so different; I find in one of the German cities, the principal pretty generally adopted in the German cities, that they provide for certain fixed payments by the company, heavy taxes and certain mileage rental for the use of the streets, and a contingent share in future profits adjusted on a sliding scale; they have there a system of municipal financing, a tremendous big army of standing officials who hold their places for life, and who are reputable people, and who can audit and watch these accounts and see the city is protected; but, you see, I imagine it might be extremely difficult for the public to really secure what it thought in advance it was going to secure under an arrangement for contingent profit-sharing, because corporation bookkeeping is such that those contingent profits might never appear.

- Q. In measuring the value of a franchise how are you going to do it; in selling, for instance, one of the annexed districts of New York? A. I do not myself like the sale of franchises for long periods.
- Q. Don't you think the arrangement on the basis of the sale of the ferry franchise would be much better, for then the city does not give them a perpetual franchise—it has an opportunity by the resale, to get a proportion of the profits? A. I think every State constitution should prescribe a limit of years as the maximum life of all such franchises in order that by no hocus-pocus could any gas company or transit company obtain a very long franchise.
- Q. Did not I understand you to say on Wednesday, that in Paris that after a fixed sum, a percentage, that then the profits, all sums above that, were divided equally with the municipality? A. Yes.
- Q. Is that the case with the gas franchise? A. Yes; and also the franchise of the general omnibus and street railway com-

panies; but the street railway businesss has never been profitable enough in Paris as to allow the city any large actual revenue from that source; it has a large actual revenue from the gas company; when you lump together all forms of street traffic, including the cab system, the city of Paris has derived a very considerable revenue from public vehicles on wheels, but not a very large amount from the street railways; it has derived just as much from omnibusses, and more from cabs, I believe.

- Q. Don't you think that would be a proper solution of the municipal problem in this city? A. That division of profits?
- Q. Yes? A. Well, I am always willing to see experiments of that kind tried.
- Q. That is, either do that or by reduction of the fare give the people the benefit above a certain fixed amount? A. The deal in Paris makes the municipal corporation a partner in business with the street railway company; that introduces complications sometimes of a bewildering and unexpected source; whether we, in this country, could satisfactorily enter on such a system I am not prepared to say; the conditions are quite different; it implies an intimacy of relationship between the public and the quasipublic corporation that I am afraid might not go hand in hand with the purification of municipal politics in this country.
- Q. Is not the difference between this and the Continent that the people are partners here without gaining any of the profits; they are not partners to the extent of becoming liable for the executive management A. You are raising a question as to the precise and detailed way in which the public could reap the benefits?
- Q. That is the question exactly, with us; in what way can the public best receive the benefits for the giving away of these franchises; in what way can they best receive their return to the public for a franchise which is theirs; they give these franchises to corporations and the majority pay little or nothing into the public treasury, and their stock is principally water? A. Under the horse-car system where the investment of the company was not a very enormous one, and where it could realize upon its investment

fairly well at the expiration of a short franchise, I was always of the opinion that a comparatively short franchise with a sale of the franchise under carefully guarded restrictions to the highest bidder might, perhaps, be the best thing; but we have observed all over this country a very great change in the last few years, and inevitably, and in my judgment, a proper and necessary tendency towards the amalgamation of our local transit system; Baltimore, for instance, as an example of an old-fashioned town, where there were many different horse-car lines and a different company on each street operating with a small investment, with horses and mules and old-fashioned cars; there you might deal with each company and with its limited privilege on each street easily enough by making franchises comparatively short, and by selling the franchises to the highest bidder; but when you come to the transformation of the old-fashioned street system of the town to the modern system of electricity where the public demands finer cars and much heavier rails, and very much larger investment in the construction of trackage, and in all the facilities, of course, you face then a different kind of a problem; it would seem, in order to justify the heavy investment, companies declare they must make, that their franchise can not be handled like a ferry franchise, and that they must issue bonds for a considerable length of time, and their franchise must be such so they can market their bonds; so you have a difficult kind of a problem; now, how are you going to meet that problem from the public point of view, in the line of your questions I am not prepared to say: frankly, I do not know what would be the best way to do it; when I look into those foreign systems and see those systems of profitsharing, sliding-scale systems of allowing the public a larger share of the revenues, as the franchise itself becomes a larger earning factor; I look on those with a good deal of interest, and they naturally appeal to a man who has an interest in the public welfare, and who does not happen to be an owner of street railway stock; how well we could introduce those systems and how, in the use of those systems, guard the public interest, I am not prepared to say.

Q. Of course, the question arises that the best franchises are already granted; the question is whether the State could interfere and become a partner in the profits of those franchises in any way; then the question arises as to the franchises which, at the present time, seem of little value, but may eventually be of great value; Mr. Wade suggested to you the other day the question whether or no after the receipts reached a certain amount the fares should not be reduced; now the question is raised on the other hand that the franchise belongs to the people, and that the taxable property of that municipality maintains fire department, and maintains the police force, and in case of a strike you must call out your guard, and a question arises whether or no this money that is profit should not be used for those protective purposes? A. I have always thought you could not settle those questions on the line of pure theory, and that it was consistent with the idea of low fares and improvements to make, also consistent with that idea, a public franchise productive of municipal revenue; I am a believer in the spirit of Anglo-Saxon compromise rather than applying questions of pure logic to a question of fact; it seems to me the practical thing is to find a midway point; but when it comes to the question what is the detail way to bring that about, that thing I do not know, because I have never had to face that question as a lawmaker; and I have not technical knowledge; it has always seemed to me, this; I have observed in years past a most curious inability apparently in the minds of the average citizen to comprehend the fact that a public franchise was a valuable piece of public property and that the municipality had no more business to give away property of that kind than to give away an enginehouse or any other piece of property, and that if you could get the community awakened to the fact that these privileges are property. that they are public assets, and that they must be dealt with carefully, then the citizens would have to find a way; the thing that has first interested me has been in things possibly — the situation is changing now—to note the contrast, for I would go to European cities where those things are not of such practical value, and there I found, although the asset was not of such great value, the

municipal and public authorities were protecting it absolutely in the interest of the public and what value there was to the public they were squeezing out of it; there was no danger that the private company was going to get public assets at a much less price than they were worth; sometimes the company was paying considerably more than the assets were worth; while I found in our American cities a tendency clear to the opposite extreme; now, I think public opinion is very different, and you find in every community in the United States a great many citizens who are disposed to assert the importance and value of these franchises as public assets, and when it comes to the best way for them to work out the realization for the community of the value of these assets. whether by insisting upon reduced fares or whether by insisting upon increased payments as taxes, or rentals, or profit sharing, and so forth, I am of the opinion that each State must grapple that troublesome problem and work it out; there is no short cut, and no magic principle that they can apply and settle it; it is a question of negotiation and mistakes and experiments and these shall approximate to improve solutions; I do not know of any formula you can apply.

- Q. What is the percentage in Paris that the corporations are allowed to earn before they begin their profit sharing? A. In the granting of each one of a series of franchises the amount of capital and amount of dividends was fixed at the commencement, as the negotiations were fixed for each company; I do not recollect definitely, although you will find it in the municipal government of Paris, that I published in that last book, in a chapter; I think I had better not make any attempts to remember what I put down in figures.
- Q. Do you think that there is a greater interest shown in the question of the handling of municipal enterprises; that is, so far as co-partnership is concerned, in this State than there used to be? A. Unquestionably.
- Q. We had a bill in Albany submitting to the people of this city the right to vote on the question of municipal ownership of railroads; I do not know as the matter was discussed here, but there

was a sufficient amount of discussion to introduce the bill, and the bill passed through the lower house; and several gentlemen of very good standing here appeared before the committee, men who are of good standing here, and whom, I judge, are in favor of it? A. I have been very much interested in the English experiments by the way of municipal ownership and the direct operation or construction for the municipality of the track, with the idea that the city owns the streets and that the city will consider a track on the street as part of the street surface, and that the franchise to the company will be for a certain limited period of years, which will enable the company to operate on that public trackage; it has seemed to me in its workings in English cities to give the municipality a feasible way to realize upon the value of the assets which it has to dispose of, because when you fasten the privilege or franchise to the tangible solid track you seem not to be disposing of mere wind or good will.

- Q. Is it a substantial fixture? A. Yes; it is a substantial fixture, and I judge that it enables the municipality to get better terms.
- Q. I know that to be the theory of a number of gentlemen who have made a very close study of this question; their belief is that the municipality should own the roadbed and put in the construction? A. They are very averse in those English cities to allow any private company to tamper with the street for any purpose.
- Q. Wouldn't you say, as a business proposition, it is unfair to the public to allow a private company to pay a premium of 25 per cent. upon the amount of actual investment brought about to show a dividend of only five or six per cent. by the manipulation of watered stock? A. It seems to me your question, as you put it, carries its own answer; a hypothetical question framed in that way carries its own answer.
- Q. That is what we have met all over the State; the stock of these companies is watered from time to time; in fact, the capital stock of very few represent any actual invested capital? A. I am a very great believer, in one thing, and that is publicity, and I

think perhaps the greatest value that work of your commission can render would be the largest possible amount of publicity; not of the kind of general information your committee is trying to draw from me, but the kind of information that you can get by the actual facts of the street railways of the principal towns of this State; what is the financial history of these properties; and when you can give us that information which most of us would like to have and have never been in possession of, you have contributed a very great deal; then that kind of publicity that gives present history of things and present status of things; it would seem to me the State itself might, if it did nothing more radical, provide for a more complete and public publicity in the accounting and reports of these corporations; the enlightment of public opinion as to the fact of the investment and of stock inflation and of dividends, and financial manipulation, the truthfulness of facts on both sides, without prejudice, I think would so instruct us that we could find our way towards the solution.

- Q. How would you consider the relative value of franchises in New York city as compared with a franchise equally favorable as to location in the city of Paris? A. The value of a franchise in the city of Paris at present, and under present methods and restrictions, is not anything great.
- Q. But I mean without restrictions, without any special restrictions being placed on either franchise? A. I do not think street railway financiers would consider that the Parisian franchise could compare for a moment with a franchise in any good American city, for the reason street transit is so different; the number of passengers that offer themselves for transport is so much smaller.
- Q. Then the Parisian franchise is not of the same value, and considered when compared as to favorable location, would not be equal to one in New York? A. No, sir.
- Q. What would be the percentage value; do you say it would be worth 50 or 60 or 20 per cent.? A. I do not think that an attempt to make a comparison of that kind that would simmer itself down to figures would be of value; it would be the wildest guess.

- Q. I did not know but you could say? A. Anyone would say that a franchise on a New York avenue is worth several times as much as on any Parisian avenue or boulevard.
- Q. This system of returns varies as much in an opposite direction, as compared in the returns of the two cities.

E. T. Landon, recalled, testified:

By Mr. Wade:

- Q. Mr. Landon, when you were upon the witness stand the other day you told us about your company having issued \$1,200,000 of certificates of indebtedness? A. Yes, sir.
- Q. An amount equal to the capital stock, that was divided among the stockholders? A. Yes, sir.
- Q. Pro rata to the amount of stock that each held; in effect, a 100 per cent. dividend in certificates of indebtedness? A. Yes, sir.
 - Q. At what time were they made payable? A. I think 30 years.
 - Q. Thirty years? A. Yes, sir; I think they are in 1914.
- Q. Now, upon that capital stock you pay the State a tax annually? A. Yes, sir.
- Q. In other words, if your dividends are six per cent. or more it is quite a dividend tax? A. Yes, sir.
 - Q. You pay upon the dividend? A. Yes, sir.
- Q. What amount? A. I do not know that I can say; it is a percentage of so many mills; I think one-half of one per cent.
- Q. If your dividend is less than six per cent, then you have to appraise your stock? A. Yes, sir.
- Q. And you pay a certain per cent. upon that stock? A. Yes, sir.
- Q. Now, this means that the course you have adopted in your company of putting out these certificates of indebtedness running thirty years has enabled your company to avoid the payment of any tax to the city upon the interest accruing upon these certificates; inother words, if the money which you pay out in liquidating

the interest on those certificates had been declared into dividends you would have been compelled to pay a tax upon the dividends to the State? A. Yes, sir.

- Q. And by issuing the certificates and paying the money to the stockholders as interest no such tax is imposed? A. No; I think not.
- Q. Now you spoke to me the other day about some correspondence or talk with the Comptroller upon the subject? A. Yes.
- Q. Now, if you care to state that you may; it is for yourself to determine if you wish to? A. There is nothing secret about it; as I told you, we paid off \$100,000 of that indebtedness, as I told you, and we were in doubt whether that was paid from proceeds of United States bonds that we held for some time, and we were in doubt whether that should appear under the head of dividends paid, and we had correspondence with the Comptroller, and under the facts as represented to him under the proceeds of the bonds, it was decided by him that they should not be held under the proceeds of dividends.
- Q. Do not you regard the issuing of those certificates of indebtedness a distribution among the stockholders and the payment of interest upon them to the stockholders for years, as an absolute evasion of the statute requiring the payment of a tax upon dividends? A. I would not like to express an opinion on that, because I had nothing to do with it; I was not an officer of the company.
 - Q. You were not an officer at the time? A. No, sir.
- Q. Who was the president of the company at that time? A. Mr. William White.
 - Q. Is he still living? A. Yes, sir; so far as I know.
- Q. Whereabouts? A. I think he lives in New Jersey, but just where I do not know.
- Q. Is there any person now living in the city who was then a director of the company? A. Our present president was one of the directors and officers at that time.
- Q. He would be likely to know all about that transaction? A. I believe so.
 - Q. Now, Mr. Landon, don't you think the statute of the State

ought to prohibit a transportation company from doing that kind of a thing and thereby relieving itself from what otherwise would be paid into the treasury? A. That would be my personal opinion.

- Q. In other words, supposing your company, instead of issuing \$1,200,000 had issued \$2,400,000, or multiply it again, \$3,600,000 you would have destroyed the value of your stock and still held a security valuable, and receiving the income from the road and the company not paying a dollar capital stock tax to the the city, dividend tax to the State? A. I do not know when that law was passed, whether those certificates were issued before or not; if that law was not in existence it would not bear on that feature of it; my impression is that the taxing law was passed afterwards.
- Q. You said those were issued when? A. In the early part of February, 1884; I only speak of that because I do not think that we have had that in mind to avoid the payment of a tax to the State.
- Q. That is so small that of itself it would not be an inducement? A. No.
- Q. But to avoid the appearance of a 16 per cent. dividend and still get all the money, might have been? A. Yes.
- Q. I do not know of anything further that I want to speak about, Mr. Landon; I thought you had some communication or correspondence with reference to the payment of that tax? A. We were in doubt about it and we wrote him on that point and he decided they were not taxable.

Recess until Tuesday, December 2, 1895, 10 a.m.

The committee convened at the parlors of the Metropole Hotel, in the city of New York, on Tuesday, December 2, 1895, at 10 a. m.

Herbert H. Vreeland, called and sworn, testified:

By Mr. Wade:

- Q. Mr. Vreeland, you reside in the city of New York? A. I do.
- Q. In what business are you engaged? A. President of a street railway company.

- Q. What is the corporate name of the company of which you are the president? A. Metropolitan Street Railway Company.
 - Q. When was that company organized?

(Witness refers to memorandum.)

Q. I do not care to be definite about the date; but about the time? A. There have been so many changes that I can not get anywhere near it on a guess myself.

(Witness refers to memorandum.)

In 1894.

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Mr. Root.— The present company was formed May 28, 1894.

- Q. As president of the road do you have charge of its management and the operation of its cars? A. I do; I am president and general manager.
- Q. So that you are familiar with its actual operations? A. I am.
- Q. And the rules adopted by the company to govern its operation and its officers and employes? A. Yes, sir.
- Q. About what is the extent of this company's road; how much trackage has it? A. Approximately, 140 miles.
 - Q. Of single track? A. Yes, sir.
- Q. Covering various streets and avenues? A. Yes; I have brought some of the special maps of the system here, if the committee care to see them.
 - Q. Could you let the committee have one? A. Certainly.
- Q. Now, Mr. Vreeland, the profile or map you present here, what do the red lines on the map indicate? A. The lines operated by mechanical traction; black lines operated by horses; depots and power houses indicated in red, with corresponding number indicating what they are.
- Q. What is that? A. That is an extension applied for and practically granted.
- Q. Prospective road? A. Yes, sir; there is nothing on the map excepting the lines of the Metropolitan Railway; and it is all the streets on the city map.
- Q. Your road commences—that is, one end of it is at the Battery? A. Yes, sir.

- Q. And it runs, the further point north that it reaches, is what? A. The extreme north point that we reach is One Hundred and Forty-seventh and Lenox avenue, the end of that red line.
- Q. Yes; I could not make out that on the map; your track is a double track; your road is a double-track road throughout? A. Throughout; of course, some of the lines are operated through different streets, but it makes a double-track line of each system, each different system.
- Q. This company was organized by the consolidation of a good many other companies? A. Yes, sir.
- Q. And prior to the consolidation the various lines were operated independently? A. I understand so; yes, sir.
- Q. About what is the extent of trackage operated by mechanical traction? A. Between 32 and 33 miles.
 - Q. And that is a cable road entirely? A. Cable and electric.
 - Q. You have an electric road? A. Yes, sir.
- Q. Is it a trolley line? A. An underground trolley line; it is an underground electric construction; we never use the word "trolley;" that is tabooed.
- Q. I understand they do not like to have you speak of the "trolley" here; what would be a trolley wire if you were outside of the city of New York; is it laid below the surface? A. No, sir; we do not use any wire at all.
- Q. How do you get the current? A. Through an iron channel bar conductor; the only wire that is used is for the purpose of feeding.
 - Q. Is that carried underground also? A. Yes, sir.
- Q. Have you ever been familiar with the operation of a trolley road? A. Yes, sir.
- Q. Do you like that system of operating cars by electricity as well as a trolley? A. In New York.
 - Q. What? A. In New York.
- Q. Supposing conditions were the same; population less dense? A. The operation of this system and the overhead trolley system are identical in its operating results; in the construction of lines this is much more costly than the overhead.

- Q. Is there a greater loss of power by this than the overhead power construction? A. No, sir; at least, we have not found it so yet; this is an experimental operation, and while we have sufficient power for the operation of 50 cars at present, we are only operating 15 on an experimental line; so we do not get the benefit of this test as we would by the extreme operation of the limit of power.
- Q. This is the only line operated by this power in this city? A. It is the only one laid in the United States, as I understand, except in Washington.
- Q. Is that a similar system? A. It is practically the same; it varies some on account of the conditions in Washington.
- Q. Mr. Root suggests this is the system in use in Buda Pesth? A. It is a type of that system; there are many changes that are an improvement on the construction there; on the new construction they are now engaged on in Buda Pesth there are many changes in construction, and that later form is the same as this here used in New York.
- Q. How many miles of road do you operate in that manner? A. There is about $2\frac{3}{4}$ miles of double track, making about $5\frac{1}{2}$ miles of single track; that is all that is in operation now; there is more of it under construction that will be in operation shortly.
- Q. Have you gone far enough with the experiments with that line to know how the power required to run a car compares with that of the cable road or th cost of producing the power? A. The cost is in favor of the cable, so far as our system is concerned, by reason of the enormous traffic on Broadway and on other lines of cable of our system; it gives no accurate test; it takes 250-horse-power to run the cable, and if you run 50 cars on that cable there would be no appreciable increase in the power required, but when you get way beyond that, as we do, it brings the cost per horse-power quite high; but, considring the horse-power required, there is less power required for the operation of the cable than the electric.
- Q. Fifteen cars you are operating by electricity by this line? A. Yes, sir.

- Q. And that runs a car about how often? A. Upon the minimum headway of cars of fifteen and one-half minutes.
 - Q. Fifteen minimum? A. Yes.
- Q. How fast are you authorized to run cars on that line? A. Fifteen miles an hour under limitations of and restrictions imposed by the Board of Railroad Commissioners.
- Q. And how many cable cars have you in operation? A. Three hundred.
- Q. They run on Broadway? A. On Broadway, Columbus and Lexington avenues, which are branches of the Broadway system.
 - Q. Here is Ninth avenue also? A. That is Columbus.
- Q. Now, the line from One Hundred and Tenth street northerly is operated by electricity? A. Yes, sir.
- Q. And on Lexington avenue you run to One Hundred and Fifth street by the cable? A. Yes, sir.
- Q. And you are now putting that in condition to operate by electricity? A. Yes, sir; it is now operated by horses.
- Q. There seems to be a cross-town road there? A. It is now under construction; it is now propelled by horses.
- Q. From One Hundred and Sixteenth east through to East river? A. Yes, sir.
- Q. Do you have various rates of speed over those lines? A. We do.
- Q. In the down-town districts are you required to run slower than on the upper part of the system? A. Yes, sir.
- Q. And the gauge of speed is the density of street traffic? A. Yes, sir.
- Q. Is there a city ordinance limiting that or fixing a maximum rate of speed? A. Those ordinances were passed prior to my connection; I do not understand that there is.
- Q. Then the maximum is fixed by the company? A. Fixed by the street conditions.
- Q. Yes, but your cars, for instance, from the Battery northerly, how far north of the Battery do they run on the same cable? A. To Houston from the Battery.
 - Q. That is the slowest motion that you have? A. Yes, sir.

- Q. And of course somebody prescribed or fixed the rate of speed at which you run your cable; I suppose it runs substantially the same all the time? A. Yes, sir.
- Q. And it is so arranged that its speed can not be increased by an employe in the power station? A. Yes; the cable travels around two segments, the diameters of which fix the speed of the cable, and it is governed by the engine to a fixed speed; if it was increased beyond the fixed speed it would be at the expense of the engine, and all the working parts of the machinery; one part is coincident with the other for the smooth operation.
- Q. So by a mechanical device there it is controlled? A. Yes, sir.
- Q. And then from Houston street northerly how far do you run by the next cable? A. Thirty-sixth street.
- Q. And that runs faster than the one below? A. Yes, sir; a little faster.
- Q. And from Thirty-sixth street northerly? A. From Thirty-sixth street northerly to the Central park the speed is the same as the middle section; the Columbus avenue cable from Fifty-third street on Columbus avenue east north cables.
- Q. Mr. Vreeland, I have read of your having one or two accidents upon the road here by the inability of the gripman to loosen the grip? A. Yes, sir.
 - Q. Is that some defect in the grip itself? A. No, sir.
- Q. What seems to be the difficulty with it? A. Those accidents are caused by what is known in cable road parlance as a strand; the cable is formed like a manilla rope of series of strands and the outer strands would get broken and kink up behind the grip; the grip is formed so that a cable in its natural size runs through like a vice; the cable would strand back like a rope in a sheave block and cause a tangled mass behind the grip which would carry the car along.
- Q. Carry the car along until the grip breaks? A. No; we have on this road a system of signals for signaling to the power house; they are located about 500 feet apart on Broadway in boxes and have a mechanical connection with the power house, the moving

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power of the cable. The employes are all drilled as to the location of these boxes and if a man finds a car is fast he opens one of these boxes and presses a signal which indicates the engine room in the power house to stop at once. We were in some legal entanglements in getting started with the city ——

- Q. Mr. Root suggests some of these accidents occurred before you had this device? A. They all occurred, that were noticeable. We have had them since, but it is impossible for a car to run more than a block and a half to-day; we are in shape now that the cables can be stopped very quickly; the stoppage of the cable is not dependent on the speed of the engine at all now; the cable wires are governed by frictional clutches, which, if necessary to stop the engine, would carry a long distance before the power of a large fly would be expanded; all they have to do is to release the mechanical friction and the weight of the car will stop almost instanteously.
- Q. How often do you inspect that cable? A. Continually and constantly.
- Q. Can you make an inspection with it in motion in ordinary use? A. The arrangement is this; the Broadway railway is equipped with what is known as the duplex system, both in machinery and cable; we do not run any cable all day; when we change over there is a small engine which runs the cable at a very slow speed, and then special men make a special examination of it; when it is running there is a man stationed with electric lights around him, watching the cable all the time; there is an especial knowledge that comes to him by inspection so he can see a small piece of waste around the cable; the slightest thing reaches his attention; he is in a position handy with bells to inform the engineer immediately to stop, and we have never had an accident from a bad part of the cable going out of the house; when it has occurred it has occurred after it got beyond that point; it is not from old cables; we have frequently had cables strand after being in service six weeks or a month; it is not occasioned by age; it is occasioned by the cable getting crossways; it is something that can not be determined by any light.

- Q. You do not know just when it is going to break? A. No, sir; I say, we have had cables in service four weeks, strand; and we have had cables in service eight months, practically as good as when put in.
- Q. I think you said 300 cable cars you were running? A. Yes, sir.
- Q. They are in use how many hours of the day? A. We run twenty-four hours.
- Q. Yes, I know; do you run 300 cars twenty-four hours? A. No, sir.
- Q. You reduce them late in the night? A. The cars are practically all in service from 7 or 6.30 in the morning and the interval necessary to get them on the road, until after theatre travel is over at night; they they are reduced down to that necessary to meet the requirements of traffic.
- Q. Do you have much complaint coming in from the overcrowding of cars on these lines? A. We do not have much complaint about it, but we know that they are in that condition.
- Q. Is it practicable to run your cars much more frequently than you do on say the Broadway line? A. Not inthepresent conditions of operation; we now have under way some changes that will make it possible to add 50 per cent.; the Broadway cable road was built for Broadway; since that it has the additional travel of these other lines thrown onto it, and to meet that it was necessary to make changes in terminals, the terminal methods; the limit our road can run, of course, or any road, is fixed by the terminus; that is now under way at the south end of the road to increase the facilities for handling terminals.
- Q. Your extending the cable road would naturally bring the traffic from both sides of the city into the Broadway? A. Yes.
- Q. And the result is to increase the travel on Broadway by street car travel? A. Yes.
- Q. Now, Mr. Vreeland, the black lines on the map which you have kindly presented to us, I believe you said were operated by horse power? A. Yes.

- Q. And they seem to cover a great many of the different streets of the city, particularly in the lower part of the city? A. Yes, sir.
- Q. Both paralleling the Broadway line and crossing it at right angles running from one river to the other, and those are all operated under one system? A. Yes, sir.
- Q. And how many miles of track have you operated by horse power? A. One hundred and eleven and thirty-eight one-hundredths.
- Q. Which is the cheaper method of operation, by horse power or by cable? A. Based upon car miles, it stands about equal; based upon the amount of traffic it is much cheaper by cable.
- Q. Yes; but it costs you about the same to propel a car a mile by cable that it does to propel it by horse power? A. No.
- Q. I thought you said based upon mileage it was about equal? A. Just repeat your question.
- Q. It costs about the same to propel an empty car, for instance, a mile by cable that it does by horse power? A. Yes.
- Q. But you find that the increase of facilities afforded by the cable road, the more rapid transit, largely increases the patronage of the road? A. Yes; of course I speak of this system; if it were a general proposition of the country I would say the cable were cheaper than the horse, but based on this system and the manner in which it is conducted and all that, it is equal propositions; cable roads around the country operate much cheaper than horse, but we do not on this road, based on a car mile.
- Q. The cost of a cable road and the cost of a horse car line is very much different; I suppose the cable road being very much more expensive? A. Yes; many times.
- Q. Do you contemplate, Mr. Vreeland, changing the balance of your lines from horse power to either cable or electric? A. We have been working continuously for the last two years on that proposition; the company having such a large mileage, and as you will notice by that map, such an irregular mileage which is necessary for the operation of the cable road in a straight line and the company could not place the trolley in on that system; they then went to work under a very large expense of expert and

technical knowledge of electrical and other motive power, of making an examination of all the systems of the world, and to that end sent the best engineers they could secure, abroad to study all the operations of all the methods there; after going through the question of compressed batteries, and the various methods of street car methods of propelling a road, and in conjunction with the General Electric Company and its corps of engineers decided on this system on Lenox avenue as the best method to be used under the conditions existing in New York; the company is now considering and working to the end of an extension of that system; the only question that remains to be solved is as to what effect the winter will have on that; we do not apprehend any difficulties but it may develop some, a change in the type of construction that will be of advantage, and to that end we are delaying some on that account.

- Q. On account of the irregular courses of your various lines in the lower part of the city to operate those by cable is practically impossible? A. Yes, sir.
- Q. Of course, if they had a storage battery system that is practicable, it could be done very nicely by that? A. Yes.
- Q. But do you understand there is a storage battery system today that can be called practicable, and operated with sufficient economy to justify its use? A. I am not prepared to answer that.
- Q. Do you know anything about that line that is operated out of Cleveland by a storage battery? A. I do not.
- Q. How many horse cars have you in operation, Mr. Vreeland? A. Approximately 500.
 - Q. That is on all the lines?

(Witness refers to memorandum.)

- A. I am lower; 650.
- Q. You are required to run your horse cars all night, also? A. Yes, sir.
- Q. How many employes have you engaged in the operation, or running, of cars? A. I could not say; I have never made a separation of the employes in classes.
- Q. How many have you all told? A. We have 2,800 that are distinctly known as operating men; of course we have a much larger force.

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- Q. In running cars, how many hours do your men work? A. The maximum is ten, and as much under as the connecting of any of these lines admit of; take, for instance, the Broadway cable roads, the men work nine hours and fifteen minutes; with an hour swing for dinner; on Lexington and Columbia avenues it goes up to the maximum of ten hours with forty minutes for dinner; we run men through the grades so the oldest men have the best runs; that is, speaking of the regular force engaged, all day force.
- Q. You have so many trips that constitute a day's work on the Broadway line? A. Yes, sir.
- Q. There is not any way by which one man being more expert can get those runs any quicker than a man that is not? A. No, sir; but the distinction is between Lexington avenue and Columbus lines, and Broadway, as I stated; the relative speed is the same both ways.
- Q. You find that experience is beneficial on your force; do you have any different scale of wages for your old men and your new men? A. We do.
- Q. How do you arrange that? A. On a basis of runs; that is, the man engaged to-day and going into the service when he is appointed is at the rate of \$2 a day so many trips at the rate of \$2 a day; that man as soon as he secures a regular run goes to \$2.40 per day, or that rate per day; the man may reach it in two months, it may take six, the average has been the last years, five months, by reason of the opening of these other lines, that a man passes to the higher rates.
- Q. Has he the privilege of working overtime, if he desires, and getting more money? A. Yes; we have an arrangement on the cable lines; in talking all my talk is with reference to the mechanical traction lines; I am not talking with reference to the horse cars at all; these last answers were in reference to that; the Broadway men, take, for instance, a man goes out at 5 o'clock in the morning and he makes six round trips; that is his work; he is laid off for dinner; he may come off at 4:30 or 5 in the afternoon; he is relieved and goes home; at half-past 9 we put on a

large number of cars for theater parties that run to Houston street; the run is made in 50 minutes; that man has the right, if he desires, to come back and make that trip, and he receives his pay for it; the men are glad to do it, for it almost represents their rent in a month; it is not obligatory on them to come back.

- Q. They avail themselves of that privilege largely? A. Yes; these men that do that work, average \$17.50 a week each, and they work six days; the old men have the privilege of saying whether they will work Sunday or not.
- Q. You strive to make some inducement for a competent man to remain in your employ? A. Our whole service from top to bottom is based on promotions; we never hire men to fill a grade higher than gripman or motorman, or conductor, or something of that class; every inspector on our line to-day was conductor or gripman a year or two ago, or the horse-car man, if he possessed the ability to fill this position of mechanical construction; they are promoted on their merits; a man that is discharged to-day that is on run No. 5; that is, put up that any man is eligible to that run by reason of service and record; the men apply for it; their records are all kept since in our service; based on the record and service it is given to the man.
 - Q. The record decides it? A Yes, sir.
 - Q. It is not subject of favoriteism at all? A. Not at all.
- Q. How do you select and educate your gripmen? A. We have a special department; the head of that department is a man that has been in the service of these companies, either the consolidated companies or previous companies, for 18 years, who has during all that time done that character of work; the first stage, if a man goes to him and asks for a chance for appointment either as a conductor or gripman; he is furnished with an application blank which he must fill out in the presence of the head of the department, in his own handwriting, on which he must give three references; the head of the department takes that application and he has special men under him that he sends half a dozen or dozen applications in that section of the city; then these men interview these references if they know this man, and if they are

willing to sign their names that he is a capable and efficient man for this service; I am talking about gripmen; then he goes back to the office of the company; if satisfactory to the head of that department, it is placed in its regular rotation in file; the superintendent makes request for 25 gripmen to-morrow; those names are taken down, a postal sent to the men to appear; they pass through an examination by the head of the department to determine they are the same men; very frequently a man comes in with the other fellow's application; at the time he makes the application, his age and color, and any distinguishing mark is put on there; then he is turned over to the division superintendent; the division superintendent lectures them on the general way of running the car, the peculiar character of the service that is met with on our road in the daily traffic and so forth; the man is then turned over to the chief gripman who has charge of all the men in the operation of cars; the chief gripman takes these men and places them with old gripmen who have been long in our service, to work them into our work; they are obliged to work two weeks in breaking in; sometimes men will get in in ten days, dependent on the ability the men show for the work; when he gets to the point of securing a regular car, before he secures it, the chief gripman goes with him over the line; the men are all taken into what is known as our gypsy booths and taken under the ground and shown what there is there; they are then called together in the evening at the club-room, and I, together with the assistant general manager and chief gripman, have a printed set of questions which these men are asked; if they do not understand them they are then explained to the body; they are generally lectured as to the peculiarity of the service and peculiarity of the leading rules then the chief gripman takes them in his and regulations; charge and he is responsible for them, and they take their position in the stairways where they get their run of the cars by rotation.

Q. And you strive to have each person, before he assumes charge of a car as gripman, understand all the rules that you have prescribed governing the operation of the cars? A. Yes, sir.

- Q. And beyond that you undertake to familiarize him with the machinery and the entire system by which it is operated? A. Yes.
- Q. Now, in selecting your conductors do you follow in that system similar to that? A. The system of appointing and the appointment blank up to the time the men leave the head of the department, is the same; when they leave the head of the appointing department they are then lectured by the division superintendent; they are then placed in charge of the division storing department, and there placed among old men to learn something about their duties; the question of conductors on street railroads is one of the hardest things, and one of the most annoying things in the operation of a street railroad; the average man, no matter what his employment has been, considers it a disgrace to go on to those cars; men who have worked on a steam railroad where they got \$45 a month working on steam railroads, I have offered them a position as conductor and they will not have it; the steam railroad men look down on the elevated road men, and look on them as toy railroad men, and so the elevated man does on the street railroad man; and then there is a class of men who only take that position to bridge over an interval; they are looking for employment all the time; out of the men that apply for the position for conductors, 40 per cent. are rejected; in six months, the whole force will change; I do not mean to say that every individual man, but in round numbers, I mean.
 - Q. In six months? A. In six months; our records show it.
- Q. Do you have much difficulty from what is commonly termed knocking down of fares? A. We are compelled to dismiss men, not for knocking down fares, but for failing to register; we are compelled to discharge about 100 a month.
- Q. How do you distinguish between them? A. It does not hurt the man's dignity so much when you discharge him.
- Q. It is just a question of terms? A. Yes; just a question of terms; it is much harder to say you discharge him for stealing; it is much easier to say you discharge him for not ringing them up.
- Q. Do you find among your gripmen that they change as rapidly as this? A. Oh, no; not at all; the last record that I have of our

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gripmen from May to October, there were eight men out of over 500 that went out of the service, and those men were, six of them for drinking on duty, which is absolutely against our rules; two of them resigned.

- Q. Do you allow your passengers to ride on your front platform with the gripman? A. We do not.
- Q. Last winter a bill was introduced in the Legislature as you are doubtless aware, providing that between the first of November and the first of April, I think, of each year, all cars in use by trolley lines and cable roads, should be vestibule cars; it failed to pass, however, and I would like you to express your opinion about the use of vestibule cars, if you have no objection to doing so, in the crowded streets of your city? A. I do not think, nor have I ever thought, that it is safe; in the crowded city streets where there is a density of traffic, both pedestrians and vehicles, side streets with wagons coming out rapidly, it is necessary for the motorman or gripman to be in a position to see everything; you place the men in a position to see everything; you place the men in a vestibule with the necessary windows, and the slightest cold, the breath of that man, together with the warmth, covers those windows with a coating such as you find in the house, and practically obstructs his view; rain comes and water trickling on the glass obstructs that view entirely as much as frost; snow storms beating against it obscures his view again; if the man at that time lowers the window for the purpose of seeing where he is, the only possible reason of having it, for his protection, is gone; you can not work him and safely operate the cars under these conditions; I want to confine that question to this city or to any large city.
- Q. Where the street traffic is congested? A. Yes; of course, men working on that question, it is one thing on the lakes or in Alaska, and another thing here; it is one thing where the train runs for miles across an open country.
- Q. You know in some places the gripman is boarded about level A. But he is not surrounded by anything that obstructs his view; that car is an open car.

- Q. No, excepting the stancheons on the side? A. They do not form any obstacle to the view.
- Q. You think it would be impracticable to operate vestibule cars on Broadway, for instance, based on your experience with the road here? A. Both impracticable and unsafe.
- Q. Of course, if it is unsafe it makes it impracticable; you recognize the fact that the road should be operated with regard to the safety of the people upon the street; now, in the operation of these various lines, Mr. Vreeland, do you have any system of transfer by which a passenger can leave one line and ride upon another for the fare which he paid upon the first line that he took? A. We do.
 - Q. How extensive is that?

(Witness hands counsel memorandum.)

- A. That shows all of our roads with the transfer points.
- Q. To get so I understand this, the first one you have got here is indicated as Avenue C, starting from Thirty-fourth street and First avenue, on First avenue to Twenty-third street to Avenue A, to Seventeenth street, to Avenue C, to Third street, to First avenue, to Houston street, along Houston street to West street, along West street to Chambers street ferry; now that gives the various streets over which that car runs from the time it starts out until it reaches the end of that line? A. Yes, sir.
- Q. Now, you have passed that at Tenth street and Avenue C? A. The top line shows.
 - Q. That it is transfer? A. Yes.
- Q. "At Tenth street and Avenue C, on Tenth street ferry cars going east and west;" that is, you transfer at the points along which it is indicated to cars going east and south? A. Yes, sir.
 - Q. Those are ferry cars? A. Yes, sir.
- Q. And those are the only transfers that you make at that point? A. Yes; that is the only intersection of our own lines.
- Q. So you could not have any other transfer there; "Broadway and Houston street, on cable cars going north and south;" so that gives A. You can have that and make it a part of the record.
 - Q. I want to understand; I am just going through this one so

that I will understand it; see if I understand it correctly? A. Yes, sir.

- Q. If I come up on your car operated on Avenue C, until I intersect at Broadway, that is at Houston street, I there get a transfer carrying me north or south to the extent of the line in either direction? A. Yes, sir.
- Q. And all these transfers are indicated on these papers that you have given to me? A. Yes, sir.
 - Q. Mr. Stenographer, I wish you would mark that in evidence. (Papers received in evidence and marked as an exhibit).
- Q. At that point that is the only intersection you make with Avenue C across there? A. At Broadway?
 - Q. Yes? A. Yes, sir.
- Q. From that point there are no branches going in other directions? A. No. sir.
- Q. So you have given all the transfers at that point that would be of any service to anyone? A. Yes, sir.
- Q. Do you transfer at all of the intersections of your lines now?

 A. We do not.
- Q. Where do you make intersections of your lines without transferring? A. There are a good many points.
 - Q. And is there some reason why? A. There is.
- Q. What is that? A. The theory and applicable application for a transfer is for a continuous ride of a passenger; now, we have got to protect ourselves and see that that passenger does not get more than a continuous ride; if we give a transfer at a point where it is possible for him to travel in a circle all day it is not the theory of the transfer system; the idea is if they are going south from here to the Debrosses street ferry the Broadway cable car does not go there; I am not going to take you to the Debrosses street ferry and bring you back here again; our transfer system is arranged with that in view; points where we do not give transfers, if we gave the transfer it would be practical for a person to travel in a circle all day.
- Q. Wouldn't it be possible for him to get a transfer? A. Those would not; take for instance, the Lexington avenue, we will trans-

fer him on Thirty-fourth street if he wants to go to the theatre on Broadway; he gets a transfer from Lexington to Broadway; that man can go down town and get a transfer somewhere and come up the east side.

- Q. He has pretty near an all-day ride? A. Yes.
- Q. When he gets onto the Broadway line he can go to the Battery? A. Yes, sir; he could if he staid on the car he first got on; it is for the purpose of allowing them to get to the theatrical part of the city.
- Q. In other words, you aim to make your transfers so it will accommodate persons desiring to reach some point on your line? A. You can go to any ferry starting from this point, any ferry our lines reach; we will take you to any ferry, but we can not after we put you on the ferry car let you go somewhere else.
- Q. How do you give out your transfers; on the car? A. At all lines except Broadway and intersecting points.
- Q. Take Broadway? A. The only transfer is made on Twenty-third and Crosstown railroad car.
 - Q. You do not make any on Broadway? A. No.
- Q. Why not? A. We have never considered it was good business policy to make a transfer there.
- Q. I come from the Twenty-third street ferry and want to get to the Metropole hotel, and I come on the Twenty-third street car until I reach the intersection of the Broadway line, and I get on there and I pay another fare? A. Yes.
- Q. I do not see why that is not feasible as the transfer at Lexington avenue; they run directly parallel, Broadway and Lexington avenue? A. The idea of a transfer is not to kill the railroad; it is to give certain advantages to the public, and if a transfer was made to all points on a railroad it would cripple the property, and if it was given on a railroad like Twenty-third street railroad from being a revenue road it would get to be a tax on the company; its whole short traffic is across town and short crosstown travel.
- Q. Now, if I want to go from the Metropole hotel to the Twentythird street ferry it will cost me 10 cents to go there on your lines, but if I were at One Hundred and Sixteenth street or One Hundred

and Fifth street on Lexington avenue and I want to go to the Twenty-third street ferry it would cost me five cents, something like four times the distance? A. It is a question of flow or overflow of traffic; probably 35 per cent. of the Lexington avenue traffic is a shopping traffic that wants to reach West Twenty-third street, and we accommodate them both ways; the other travel is a very small thing and would not pay for the printing of transfer tickets; those questions are all considered with reference to a good business policy.

- Q. But is seems to one who is not familiar with the business, strange that in adopting a good business policy that you can afford to carry a person over substantially the same line four or five times the distance on another line all for one fare, and still you can not take them on Broadway for 20 blocks, and then on the Twenty-third street line to the ferry, a much shorter distance; now at Thirty-fourth street and Broadway do you make transfers? A. Unfortunately we do not own that line.
- Q. That is right; we had a gentleman here the other day that owns that line? A. He has my sympathy; I mean for the ownership of the line, not for appearing before you.
- Q. That is a pretty good line, is it not; I could leave the Fifth Avenue Hotel, on Broadway, up to Thirty-fourth street, and then go through to the East or West River on one fare? A. Yes, sir.
- Q. What line do you run to Chambers street, if any? A. What is known as the Chambers Street Cross-town line; it runs east through Chambers street and west through Duane street.
- Q. And do you transfer where that line crosses Broadway? A. We do.
- Q. I had better come over on the Chambers Street Ferry, when I come to the city, and give up a nickel there, and come up town by your road, instead of coming up Twenty-third street and give up 10 cents; I want to ask you a few more questions about the transfer; how far is the furthest distance that you carry a passenger by the transfer system for 5 cents? A. The whole length of the road; from the extreme south to the extreme north end.
 - Q. About what is the distance? A. Of $9\frac{1}{2}$ miles.

- Q. For 5 cents; that is, practically, in its operation, your transfer system, where it is in operation, is practically a reduction of fare? A. Yes, sir.
- Q. Do you find, as a result of that, it increases the patronage of your road; do you think it does? A. Yes, we do; or we would not have one, at least so largely.
- Q. In other words, it is a very important feature for the road, as it is for the public; you are satisfied with it as far as you have gone with it? A. Yes, sir.
- Q. You believe it to be both beneficial for the road and for the patrons of the road? A. In a city of the general topography of New York city, where it is a narrow peninsula, the flow of travel is north and south; that travel naturally seeks the quickest channel of communication; the best and quickest method of transportation gets the passenger unless some slower one can give him a substitute and clear gain; the slower one may be able to place him at the door of his office, or the lady at the door of the shop where she wishes to shop; take a city of a large circumference, that is spread out, I do not believe in the transfer system; in New York city I do.
- Q. You take the city of Buffalo, and that covers most of the earth up there; why, they have got a transfer system which, I think, covers every line in operation, I think, by that company; the topography of the city is not anything like that of New York, and they seem to think it works well there; about how many transfers do you issue in a day, do you know? A. Yes, I know exactly; the records are forwarded to my office every day.
- Q. How do they run? A. I have a report here of November 26, 1895; total transfers, 87,805; of November 29th, 84,255; it makes an average, including the Sundays, it would make an average of 80,000 a day, nearly; 30,000,000 a year; which, reduced to money, means \$1,500,000; and 70 per cent. of that transfer is conducted on what is known as commission hours, between half-past 6 and 9 in the morning, and half-past 4 and 7 at night; 70 per cent. of it.

- Q. That demonstrates this, that it is used largely by people going to and from their business and their work? A. Yes, sir; it has opened the possibility of a man working for low wages, living in a densely populated district, in a tenement-house, from getting out and getting in a better portion of the city; a man working for small wages, 20 cents a day represents a very large percenatge of his daily remuneration; 10 cents is not so much by 50 per cent.; that man can go and live somewhere else by the transfer system; the working classes, that in the lower East side of town, use the transfer system very largely; in our opinion, we have given to the working people of New York a million dollars a year in car fares.
- Q. What are the gross receipts of your entire line daily; can you give that? A. I can, but I do not care to; not as a public proposition; it is a large company, and has large investments in it, etc., and every question of that character is taken up as a bull and bear proposition on the company.
- Q_{i} Well, your annual report gives your gross receipts for the year? A. Yes.
- Q. That, of course, is public property? A. That is public property.
 - Q. Well, I can divide that by 365? A. Anybody else can.
- Q. I do not desire to be unnecessarily inquisitorial? A. It does not make any especial difference; we carried last year 125,000,000 of passengers.
- Q. The year? A. About 120,000,000 last year; this year we will run about 140,000,000, on the average we are running now, and 30,000,000 passengers that ride a second time; I mean by speaking of the 140,000,000, 140,000,000 that pay fares, and counting the 30,000,000 transfers additional, it would run to 170,000,000 people transported.
- Q. Do you think, Mr. Vreeland, that the entire transit business of the city is increasing? A. The statistics show it; last year there was 450,000,000 moved in this city by the elevated and surface lines against about 435,000,000 the preceding year; the average of this year will exceed that of the previous year, but not

very largely in excess if the average holds out as it is running now.

- Q. Do you attribute that to increased population, or to the increased facilities furnished by the various companies for transportation in the city? A. It is chiefly the large normal increase of population of New York city.
- Q. And I suppose the outlying districts are growing rapidly and more in proportion than the extent of business spreading over the territory? A. Yes, sir.
- Q. Now, Mr. Vreeland, what is the capital stock of your company? A. Sixteen million five hundred thousand dollars.
 - Q. Has it a bonded indebtedness now? A. It has.
- Q. Of what amount? A. Nine million four hundred thousand dollars.
- Q. That includes all the charges against the road? A. No, sir.
 - Q. What other? A. It has its rentals paid to these lines.
 - Q. Those are annual expenditures, are they not? A. Yes, sir.
- Q. I mean, in balancing your books, you charge your road with its capital stock and its indebtedness, and, of course, it is charged with the cost of equipment, etc.; does the bonded indebtedness represent substantially the indebtedness of the company; I do not mean to include in that any small, floating debt you may have, or trade bills, or anything of that sort? A. Yes, on the asset and liability side, one offsets the other.
- Q. Sixteen million five hundred thousand dollars and \$9,500,000? A. Sixteen million five hundred thousand dollars and \$9,400,000.
- Q. Are you required to and do you maintain any portion of the street over which your tracks are laid? A. We are required, under the majority of our franchises and charters, within our track and 2 feet outside.
 - Q. Under the general railroad act? A. Yes, sir.
 - Q. And you do so? A. Yes, sir.
- Q. Under that act do you put down new paving where it is ordered? A. We do not.

- Q. But you have to keep in repair that portion of the street? A. Yes, sir.
- Q. Does your road pay anything to the city in percentages or any part of it? A. Yes, sir.
- Q. How much? A. The last fiscal year we paid between \$181,000 and \$182,000.
 - Q. That is, a certain percentage? A. Yes, sir.
- Q. And have you some lines that are not subjected to that burden? A. There is an awful net work there; I could not answer that; I would not say whether there was or not; there may be.
 - Q. What is the percentage paid? A. It is variable.
 - Q. On different lines? A. Variable in different lines.
- Q. Have you given the subject, Mr. Vreeland, of obtaining franchises from the cities, much consideration as to the best, or satisfied yourself as to the best, method from the standpoint of the city? A. It is a matter that I have never been called upon to give any consideration to, for the franchises were secured when I took charge of the system.
- Q. You have not obtained any extensions? A. Nothing but short extensions that belong to the city.
- Q. Have you watched the workings of the so-called Cantor act and its amendments here in the city of New York; you know what I refer to as the Cantor act? A. I do.
- Q. The sale of these franchises at public auction; what do you think of that method of disposing of them? A. Those are questions that I have never been called upon to give any consideration; with a large corporation it is divided up into departments, and departments take charge of these various things; and there are questions that I never have been called upon to give any consideration to.
- Q. Mr. Vreeland, you know that the law requires the assent of the Railroad Commissioners to their increase of capital stock sought by a railroad company; are you familiar with that provision? A. In a general way.
- Q. Yes; but people can incorporate and fix their stock at anything they have a mind to at the time without the assent of the

Railroad Commissioners; now, to illustrate it; you and I and enough of us could incorporate a company to-day with \$16,000,000 or \$40,000,000 of capital, if we saw fit, just as well as \$100,000, without the assent of the Railroad Commissioners, but if we incorporated for \$50,000 and wanted to increase to \$60,000, we would have to get their assent; do you believe it would be beneficial if the statute would require the assent of the Railroad Commissioners to the amount of capital stock, if it were originally placed above a certain sum? A. I am an operating railroad man, and I never have been anything else; those questions are questions that go to the leading departments of the service, and I can not answer them.

- Q. Then you would refer me to your attorney on those questions?

 A. I would have to, because I could not speak intelligently on them.
- Q. While you are president and general manager of the road you devote your entire time to its actual operation? A. Yes, sir.
- Q. And the financiering of the business and the creating of the machinery by which the corporation is run is in other hands, and that you give no attention to or make no study of it? A. The financiering, so far as the operation of the system is concerned, as well as the operations; so far as the financial part of it is given to operation—
- Q. What I mean by the financiering, is everything; its bonds and stocks, and so forth A. Oh; I have nothing to do with that.
- Q. Do you know how much was paid into the company for the stock, if anything? A. I do not.
- Q. You do not know upon what basis that was issued? A. I do not; I found the company two years ago and I have been with it or they found me.
- Q. If I understand you, you are devoting your entire time to the operation of this road; that is, in fact, your business; your main business? A. Yes, sir.
- Q. Trying to familiarize yourself with every department of its operation? A. Yes, sir.

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- Q. And you are at the head of every one of them? A. Yes, sir.
- Q. Have you had under consideration, or can you devise any scheme for taking care of the travel at those hours of the day when it is greatest without overcrowding your cars and with your present facilities, with your present road? A. The consideration about that I spoke of earlier has been given to the necessities of the traffic; in the first place, with the traffic facilities that we have, or the present trackage, it is possible with better terminal facilities, which are now under construction, to increase very largely the number of cars that can be operated.
- Q. You know there is constant, or practically constant complaint about the overcrowding of cars; I suppose you hear a great deal about that? A. That is true of every large city in the United States, that does business into a small radial center, and the suburbs is given up to residences.
- Q. You know last winter there was a bill introduced in the Legislature requiring you to furnish every passenger with a seat; I do not know but what it forbid you to let them on the cars unless you had a seat for them? A. I had rather be in Albany or some other county in New York State when it was imposed.
- Q. In other words, the people would not be suited with any such rule? A. The people would not stand it an instant; the people prefer to ride and stand up rather than walk, and there are 200,000 people in the lower part of New York city that could not get from lower New York city to their homes to-night if such a law was in effect, and it would be utterly impossible for the companies to provide for them.
- Q. Can you tell me about how much the operating expenses of these roads have been diminished, if any, by their consolidation, and now operated under one system? A. There has been a very material reduction on the operations from what was the former average; had it not been done it would have been impossible for the company to have lived and to have given what it has to the public; their first step after consolidation, the cutting off and doing away with a large number of high salaried officers; for instance, to-day I am president of the Metropolitan Street Rail-

way, which divided up into its former subdivisions represented ten presidents with their accompanying office force, and the same is true of secretary and auditor and their officers, which today, is one man, and was ten men with the accompanying forces; you can pass that into direct operation, the operation of cars; first comes head of departments; it is possible to get a very much higher grade and more expert class of men to take charge of the large department than it is divided up into small departments, and that man at the higher rate of salary is not nearly as high paid as were the eight or ten previously; the same thing follows all the way down through; taking the question of repair shops; instead of ten repair shops there is one; instead of ten foremen there is one general foreman; the working forces are on the same general average, but by the consolidation of equipment at one point for its repairs and maintenance it does away with all of what is classed as organization expense in connection with the operation of the shops and these subdivisions; the same thing follows into small things; harness shops, where each division had its harness shop with a certain number of men, by consolidating them into one that shop does away with all the foremen and all the extra help; the various departments in the stable departments, care of horses and class of horses, there is a great economy in that; for instance, a small road has 500 or 1,000 horses, and they employ a man called a veterinary; he has simply grown out of the stable; when you come into a large system with 5,000 or 6,000 horses we employ a man skilled technically and thoroughly for his work; he has men under him; he makes a regular tour and calls at every place at a certain time in the day; the grade of horses is a very important thing; to-day we are running a very large increased mileage in horse car miles; we have a very much less number of horses than three years ago; it is raising the individuality of individual horses; in small stables the number of horses kept is small and it results in a depreciation of the stock, and that a horse must work whether he should or not; he gets to the point instead of making 18 miles a day you receive 4 or 4½ miles, and one good strong horse, purchased at a fair price, doing 18 miles

a day, represents in money of the stables that were doing 4 miles a day; in some stables there is less by 300 horses than a year ago; that does away with the hostlers and all that class of work that goes to make up the expense of the horse system; the horseshoeing shop is another; and when you come to the question of supplies, we are the largest buyers, perhaps, in New York city, of feed, and horseshoes and all the materials and supplies that go to make up the maintenance of the cars; we buy at wholesale prices and get the benefit of all discounts and all special discounts in conjunction with it; we have our one large central store, the supply ' department, taken care of by one man; a few years ago that was divided up into many small stores; the amount of money invested in these small departments represented a large investment; the reserve of every division is accumulated in the large one, and then you get the advantage of all the markets and discounts; and then, in the direct operation of the cars by consolidation you get a large — aggregate new facilities for the public; and I have here a list of connections of the extensions and branches made since the consolidation, too, between different divisions, which covers three type-written pages; that is it.

- Q. If you will let me take it I will have it marked in evidence. A. Consolidation makes it possible to run your cars to the best interests of the traveling public; where a line is found to want two routes they can do nothing beyond running the cars in that direct route; we can give service there; we are in position with these 140 miles of track to run cars anywhere; if we feel that there is a business center that would benefit the public to reach that, we change the route of the cars, and take the people where they want to go; not as philanthropists, but there is money in it.
- Q. It is a matter of business? A. Yes; it is what has raised the business from that small business to a very large one.
- Q. The better you can accommodate and the more you can please the people the greater revenue of your road? A. It is just as true of a railroad as of a dry goods store or any other class of trade; it is a business proposition.

- Q. Mr. Vreeland, can you tell me about what is the cost of a cable line per mile? A. No; it is something no man can tell; if you asked me what was the cost of a mile of yokes and rails I can tell you; it does not represent anything in the cost of a cable road; it is simply an incident in its construction.
- Q. The cost of what? A. Yokes that are in the ground; they do not represent anything in the cost of construction.
- Q. What is the principal feature? A. Getting down into the ground, and removing gas and water pipes and pneumatic tubes and electric man-holes and everybody else's man-holes that are in the way.
- Q. If you take out a gas main you must replace it? A. Yes, sir.
- Q. Or a water pipe? A. The company says there are our pipes there, put there under the law; if you want to remove them you have a right to, but you will have to be responsible for any damage you cause or stoppage to our service, and you must move them at your own expense.
- Q. You could not estimate the cost of a mile of cable road except that you knew those conditions? A. That is the only way.
- Q. Eliminating those, and simply going down into the ground, as you have to, to construct a cable road, and finding no wires or gas or water pipes or mains or any other obstruction, you could tell what it would cost; that is, you could estimate in advance what it would? A. In a general way.
- Q. If it was a rock you had to blast it would cost you so much more money than simply earth; what kind of a rail do you use on the cable lines? A. A 7-inch girder rail.
- Q. Do you think as heavy a track is required for a cable road as an electric road? A. Not as far as the rail is concerned.
- Q. The car is not as heavy? A. There is nothing to the car except sufficient strength to carry the passengers.
- Q. Just the trucks and body? A. Yes; it goes back to the horse car body increased in size.
- Q. Have you, where you are using this electric line, had any complaints from any source growing out of what is claimed to be

a destruction of iron or water or gas mains laid in that vicinity? A. No; it would be impossible.

- Q. Why? A. The conductors, one positive and the other negative, are in the conduit, entirely protected by steel sheaves and concrete into a bed of concrete and steel; the return current is through the conductor and not through the rail; beyond that the current does not go through the rail at all; the two channel bars are down in the conduit side by side; one takes the current and one returns it.
- Q. Doesn't it get to the rail at all? A. No, sir; it goes up and returns through what is known as the plow; that is the same thing as the grip on a cable car, that makes the conduit.
 - Q. Your current does not get to the rail at all? A. No, sir.
 - Q. It is taken up from the motor? A. Yes, sir.
- Q. Have you ever looked into that feature of electric lines, the feature of destroying those mains by filling the earth with electricity? A. No, I have not.
 - Q. You know there is some complaint with it? A. I do.
- Q. At many places where this thing first started, if they could get out and hitch to a water main for a means of returning the current they did it; you know that, do you not, in many places, and they are now complaining that they leak; your report, Mr. Vreeland, to the Railroad Commissioners of 1894 gives the gross receipts of your road, gross earnings from operation, \$5,351,812.70; that is correct, is it not? A. Those are sworn statements.
- Q. Yes; I think you told me, I have forgotten whether you did, how that compares with 1895? A. With 1895?
- Q. Yes. A. I spoke of averages; on taking the average of the last two or three months, that it would be a difference of 15,000,000 or 20,000,000 people.
 - Q. Have you made the report of 1895? A. No; what report?
- Q. To the commissioners? A. Is that report ending when the fiscal year does?
- Q. June 30, 1894? A. Oh, you are speaking of the last fiscal year; that has been rendered; I do not recall the figures; they were, approximately speaking, \$6,000,000.

- Q. It ends the 30th of June, and that is why I thought it must have been made? A. Yes; it has been made.
- Q. Now, how much tax do you pay to the city upon this property, Mr. Vreeland, outside of the percentages which you have paid? A. Between \$164,000 and \$165,000.
- Q. Do you know what the assessed valuation of your plant and real estate is? A. No.
- Q. Does that include your municipal taxes, your school tax and your State and county? A. No; you asked me the city; the State is independent; the total paid of all classes, I have not it subdivided up; the total paid by the company of all character, city and State, was \$439,933.07.
- Q. That includes the tax which you paid upon your gross receipts to the comptroller? A. It includes everything.
- Q. It includes the capital stock tax on dividend tax whichever it is? A. That includes everything, city and State.
- Q. What dividends were declared during the fiscal year ending June 31, 1895? A. Three per cent.
 - Q. Per annum? A. Three per cent., yes; for that year.
- Q. What rate of interest do the bonds bear? A. The major part of them five; there are some six and some seven that have not been funded yet.
- Q. Those are old bonds that have not yet been retired? A. Yes.
- Q. Mr. Vreeland, what lines do you lease? A. The Broadway and Seventh Avenue Railroad, the Twenty-third Street, the Forty-second Street and Grand Street Ferry, Central Park, North and East River, Sixth Avenue, Ninth Avenue.
- Q. What is the Broadway and Seventh avenue, running from what point to what point? A. That is all those lines; I gave the chairman a special map that has got all those lines exact; and then on the transfer card I gave you it gives every one of the roads in detail; it is a pretty big proposition to handle it all the way through in detail.
- Q. For how long a term did you lease the Broadway and Seventh Avenue? A. I could not answer that without referring to records as I found it when I took charge of the company.

- Q. Can you enable him to answer it, Mr. Root?
- Mr. Root.— Nine hundred and ninety-nine years. Those are all 99 or 999 years.
- Q. Do you know what rental is paid to the Broadway and Seventh avenue? A. Eight hundred and thirty-five thousand dollars a year.
- Q. Can you give me the amount of trackage of that road; it is about 10 miles of track? A. No; it is over 20; all those roads show their mileage in the Railroad Commissioners' report; the Broadway Cable is 10.20.
- Q. That is part of the Broadway and Seventh Avenue, is it? A. Yes, sir; it is 26 miles.
- Q. Now, that corporation is in existence and maintains its own organization? A. Yes, sir.
- 'Q. And that company constructed the Broadway Cable road?

 A. No, sir; this company constructed the Broadway Cable road.
- Q. Not since 1894? A. Am I not right in that; my position in the matter is that when I came here I found a cable road; I do not know who built it, and I never inquired.
- Q. Your company was not organized until 1894; the point I wanted to make here is, that your company did not do it; that is the Metropolitan Street Railway Company? A. The Metropolitan Street Railway Company did not do it, no.
- Q. And does any of the stock, the \$16,500,000 of which you have spoken, or the \$9,400,000 of bonds, represent any cost of construction of that line? A. I do not know.
- Q. Now, what rental do you pay for the Twenty-third street ferry? A. One hundred and ninety-three thousand dollars a year.
- Q. I said the Twenty-third street ferry; I meant the Twenty-third Street Railroad. A. Yes.
- Q. And the Forty-seventh and Grand? A. That is the Forty-second.
- Q. And the Forty-second and Grand Street Ferry? A. One hundred and forty-eight thousand eight hundred dollars.

- Q. Central Park and North River; how much do you pay for that? A. Two hundred and twenty-eight thousand dollars.
- Q. And the Sixth Avenue and Ninth Avenue? A. Sixth Avenue, \$145,000; Ninth Avenue, \$50,500.
- Q. Were you interested in your company at the time of its organization? A. The Metropolitan Street Railroad Company?
 - Q. Yes. A. Yes, sir.
 - Q. Were you one of the incorporators? A. Yes.
- Q. And do you know the method by which the stock of the old companies was changed into the stock of the new, when the consolidation actually took place? A. No, I do not.
- Q. Of course, you had to retire the stock of the old companies which went out of existence in some manner? A. Yes.
- Q. That was entirely in charge of your legal department? A. Yes.
 - Mr. Root.—Issued share for share.
- Q. So that the stock of your new company actually represented the stock of your old companies that went out of existence at the time it went into consolidation; and Mr. Root, you can probably enable the witness to answer this: The bonded indebtedness which your company used then, was that used for retiring the bonded indebtedness to the new company?
- Mr. Root.— We did not aggregate; that bonded indebtedness he states about, it was the bonded indebtedness of the old companies to which it succeeds as successor by consolidation.
 - Mr. Wade. And your new company assumed it?
 - Mr. Root.- Yes; the law imposed it upon us.
 - Mr. Wade.— Certainly.
- Q. You have on the map here, Mr. Vreeland, which you have furnished, statements of different pieces of real estate? A. Yes, sir.
- Q. From 1 to 16, both inclusive; can you tell us the value of the real estate? A. Ten million five hundred thousand dollars.
- Q. And are some portions of that the property of the leased lines? A. Yes.

- Q. And some portions the property of the consolidated company? A. Yes.
- Q. Now, by the report of the Broadway and Seventh Avenue road, Mr. Vreeland, made as of June 30, 1894, it seems there is an indebtedness of first and second mortgage bonds and first consolidated mortgage bonds of \$9,650,000; does your company under this lease in any way assume that indebtedness? A. The company pays that company so much a year for rentals; what they do with the rentals I do not know.
- Q. You have nothing to do with that bonded indebtedness? A. I presume that the rentals that we pay cover it.
- Q. Now, the Twenty-third Street Railroad seems to have had an indebtedness the 1st of March, bonds and debenture bonds, \$400,000; is the same thing true with reference to that indebtedness as with the Broadway and Seventh Avenue? A. Yes, sir.
- Q. You paid them the rental of \$193,000, and the indebtedness is taken care of by the company itself that owes it? A. Yes, sir.
- Q. Well, who is putting in the cable line on Twenty-third street, your company or the lessor? A. The Twenty-third Street Company.
 - Q. The Twenty-third Street Company is doing that? A. Yes.
- Q. Was that a part of the conditions of the lease? A. I could not say as to that.
- Q. The expense of it is borne by the lessor? A. Yes, sir; I believe so; that is not a cable road; that is an electric road.
- Q. I notice you are running cable cars on part of it? A. That is only on the continuation of Lexington avenue; it is an electric road there.
- Q. How are you going to run a cable road and electric road all in the same slot? A. We do not; we make two slots.
- Q. But you expect to operate both cars over the same track, electric and cable? A. Yes, sir.
- Q. Now, whatever indebtedness the other lessors owe, so far as your company is concerned, it stands in the position the same as these two I have inquired about? A. Yes, sir.

Q. Mr. Root, at the time of the consolidation, if I understand you, the stock that was issued to retire the stock of the old companies, and if there was any issued in excess at the time of what was required to do that?

Mr. Root.— I understand not.

By Mr. Nixon:

- Q. It was retired share for share; you can make that statement on the statement of the counsel, Mr. Vreeland? A. Yes.
 - Q. Then we will leave that.

(Map and table of the roads of the Metropolitan Company received and marked in evidence.)

Recess.

Proceedings of Wednesday, December 4, 1895, at 10 a.m.

Edward Lauterbach, called and sworn, testified:

Mr. Lauterbach.—I appear this morning instead of Mr. Albert J. Elias, the president of the road, who is very ill. I have been connected with the Third Avenue Railroad for fifteen years, as director and as counsel, and am familiar with its affairs; probably a longer connection than that of Mr. Elias.

By Mr. Wade:

- Q. When was the company incorporated? A. In 1853; it was incorporated as a railroad corporation in 1853 under the general railroad act; the franchise was the result of a grant by the local authorities, the common council and the mayor.
- Q. And the franchise granted at about that time? A. Yes, sir; the grant was made by the local authorities under the assumption that they had the authority to make it; that grant was to secure the Second Avenue, the Eighth and Fourth Avenue; in 1854, I think it was, the Legislature enacted a law preventing any further grants by the common council, the validity of the grants having been questioned and the propriety of their granting having been

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omitted and invalidated all grants up to that time; that grant was originally made to Mr. Van Schock and his associates, and was assigned by him to the Third Avenue Railroad Company, which had been incorporated under that act; the charter authorizes the construction of a road from the City Hall through Chatham square and the Bowery, up to Harlem river, a double-track railroad; the original capitalization which represented cash expenditure, was \$2,000,000 of bonds and \$2,000,000 of stock, and the capitalization remained at that figure until about eight years ago.

- Q. You say the capital stock of \$2,000,000 and bonds of \$2,000,000? A. Represented the actual expenditure of the company for the acquisition of the depots and building the road.
- Q. Was that money actually paid into the treasury? A. Yes, sir; it was all paid into the treasury.
- Q. How much road did they construct? A. A double-track road from City Hall up to Harlem river, eight miles of double track and 16 miles of single track; they acquired their depots at that time, the one at Sixty-first street and Richmond avenue, and afterwards sold that and acquired the one at Fifty-first street, and then subsequently acquired the Remsen street house, which they have used since partly as a depot.
- Q. About what was the value of the real estate? A. I think the value of the company's whole real estate at the present time would be some \$5,000,000, but that includes real estate at the Bowery and Bayard and Twenty-ninth and Thirtieth avenue and the plots I have described, all of which are very large parcels of ground, and the improvements on them.
- Q. For what purpose do they use that amount of real estate? A. The real estate is all being used for the purpose of the company; real estate at Bowery and Bayard street is the lower cable power-house; at Sixty-first street and Third avenue is the principal power-house; the real estate at the Remsen house and One Hundred and Thirtieth street and Third avenue is used as a car depot and for terminal purposes; the real estate at One Hundred and Twenty-ninth and Tenth avenue is used as power-house and for the storage of cars; and some real estate has been recently ac-

quired at Tenth avenue and One Hundred and Eighty-fifth and One Hundred and Eighty-sixth street, which is to serve as an electrical power-house for an underground trolley system, which will be put in operation in about a month, in order to test it during the winter, the Love Electric System, and has been in operation successfully in Washington.

Q. How many miles of road do you expect to operate by that system? A. That is a short stretch; the company continued to operate its original road, and in the meantime a grant had been sold to the grantee; it was the first road that had been sold by the city under the authority of the State, the One Hundred and Twenty-fifth Street road, extending from East river to North river to One Hundred and Twenty-fifth, and from One Hundred and Twenty-fifth along North as fast as it might be opened and created; the Tenth avenue is now opened to Fort George, and the Tenth avenue was opened to be used for railroad purposes as far as One Hundred and Eighty-sixth street; the electric road extends northerly from One Hundred and Eighty-sixth to One Hundred and Ninety-fifth street, about half a mile; and we purpose to use the same system on Tenth avenue as fast as Tenth avenue is opened; we are waiting to connect with Tenth avenue beyond the low-lands, just beyond Fort George; that road was sold, I think, for \$60,000 and was subsequently acquired by the Third Avenue Railroad Company out of its treasury without increase of its capital stock in any way; it was a horse road and did not pay; the question of change of construction came to be a serious one in New York, and the Third Avenue was the first to put in a cable road, on Tenth avenue, from One Hundred and Tenth to One Hundred and Eighty-sixth street, where the grades were very heavy and the obstacles as great as possible to be in the city of New York, and where the territory was very little developed; but the company went ahead and constructed the road, although everyone predicted its failure; the property at One Hundred and Twentyninth street was acquired and the road put in successful operation; the grade of the Croton aqueduct was right under Tenth avenue, and no blasting could be done, and it had all to be done by actual chiseling and drilling, and cost a great deal of money, much more than any cable since has cost, probably \$100,000 a mile of doubletrack, irrespective of the real estate; in order to pay for that improvement, which amountel altogether to about \$1,000,000, the cabling was then proceeded with on One Hundred and Twentyfifth street, where the difficulties were very slight and where, perhaps, the expenditure was only 60 per cent. of the expenditure on the hills, and the road was then successfully operated; in order to pay for that, and in order to pay the \$2,000,000 of bonds which were then maturing, an issue of first mortgage bonds of \$5,000,000 was authorized, which was sold at 105 to Vermilye & Co., bearing 5 per cent. interest; \$3,500,000 were sold, and \$2,500,000 were used to take up the original bonded debt, and the other \$3,500,000 was used for the purpose of improvement; that was the condition of affairs when it was resolved to put a cable on the Third Avenue road; this was before the construction company had enunciated the improvements in the city of New York; after the consents were obtained and it had to go twice to the New York State Court of Appeals — the city contested our right; it was finally adjudicated that we could proceed and we did proceed, and an additional \$1,500,000 of bonds were issued and sold at 105, and the balance of the money was raised according as the necessities of the company required it; the whole authorized issue of capital stock is now \$9,000,000, of which \$8,600,000 has been issued, all at par, for cash received into the treasury and expended for the purposes of construction of the road; there has not been a penny of water in that; the only large gain by anyone is, that the stockholders got the stock at par when the market value was above par; each stockholder had a right to purchase in proportion to the original holdings; so those who had the original \$2,000,000 held almost entirely the stock; the present is \$9,000,000 of bonds; of \$15,000,000 of bonds, and \$8,000,000 are actually issued, and all represent dollar for dollar of actual cash.

Q. Your bonds represent 105? A. Yes, sir; so that there is no water or any paper capitalization in the company; after the acquisition of the One Hundred and Twenty-fifth Street Railroad:

Company the company availed itself of a consolidation act that had been passed, permitting street railroads to be consolidated, and the One Hundred and Twenty-fifth and Third Avenue became consolidated in one, each retaining the privileges of its original charter; and so we did for a number of years charge a separate fare on One Hundred and Twenty-fifth street from the Third Avenue fare; the era of transfers come into place and the company have since only charged one fare, and in addition, have made arrangements with the East River and Dry Dock Railroad for transfers; the fare is divided substantially between the two companies, and so that now for a five-cent fare one may proceed from the foot of Grand street, or foot of Desbrosses street, on the Dry Dock cars reach Third avenue and proceed to the One Hundred and Twenty-fifth street, and then take the One Hundred and and Twenty-fifth street line and go to Fort Lee ferry, or Riverside Park, or along to One Hundred and Twenty-fifth, and as much further as the road extends hereafter.

- Q. Now, about how many miles— A. Exclusive of the Dry Dock Railroad, 14 miles; inclusive of the Dry Dock, about five miles more; about 20 miles double track that represents.
- Q. How long a road? A. You can ride 20 miles for five cents; you can ride from Grand street ferry up to One Hundred and Twenty-sixth street.
- Q. That is 20 miles? A. That is about 20 miles; 18 or 19 miles for five cents; that is really taken advantage of; on Sundays the cars do an exceedingly good business in carrying people from the East side, the tenement house district, up to Fort George.
- Q. I want to ask you about the transfers; are those transfer tickets good until used? A. I think they are made for a continuous trip; our transfers amout to, on a Sunday, to about 30,000 a day; I should say on every day; it is an average, 30,000 a day; it is more than that on Sunday.
- Q. This One Hundred and Twenty-fifth Street road became consolidated in your Third Avenue road? A. In 1886.
- Q. And when you consolidated you took up and merged the stock of both companies into the consolidated companies? A.

Precisely; we bought the stock and owned the stock of the One Hundred and Twenty-fifth Street Railroad, all the shares, and we issued no new stock; we paid for it out of the treasury; we issued no new stock; we simply retired it.

- Q. You kept up the organization? A. There is a virtual merger.
- Q. How can you keep up an organization consolidated with another? A. It is consolidated and we do not need to keep it; except technically we keep the stock in existence; having issued no other stock we keep alive; we do not report it as an asset in any way; it is probably extinguished; there was an increase of the capital stock of the Third Avenue Railroad stock when the consolidation took place.
- Q. You have now in operation how many miles of cable road?

 A. Fourteen miles double-track cable road.
- Q. And about one-half electric? A. We will soon have that; that is simply experimental.
- Q. Are you running any horse cars now? A. No, sir; we run 337 closed, of which 100 are trailer cars; 265 open cars, of which 90 are trailers; those are in steady use; in the summer time we run additional cars, 65 or 70.
- Q. You do not run open cars in the winter? A. No; they insisted on them late in the season, but they are taken off in November.
- Q. About what are the number of passengers carried daily? A. We carry in a year I will give the whole business; we received from car passengers last year, \$2,583,011.17, which would represent 41,000,000 of passengers; the naked operating expenses were \$1,528,468.60, about 60 per cent.; that is exclusive of taxes and bond interest which amounted to \$330,589.81; taxes and bond interest, \$330,589.81; our receipts from other sources other than car passengers, leases and so forth, were \$67,052.12; our dividends paid last year were \$559,000, being an average of about 9 per cent.; this stock was increased during the year, so the precise dividend I could not state, but it was about 9 per cent.
 - Q. What is your stock worth now? A. The stock is worth 190;

that is, they are paying for the stock 190, and I think it is worth more; it is fair to say in respect to that that in the early portion of the company shows the venture that for the first eight or ten years of the company, while it was developing its own business, that the stock which had been paid for 100 cents on the dollar, fell to 10 cents in value, and the company was on the verge of bankruptcy all that period, without paying any dividend, and its prosperity is due to the fact that it built up the territory through which it traveled; I presume in 1853, when it began to operate as far north as the Harlem bridge there was scarcely any development of territory north of Twenty-third street, and probably not north of Sixteenth street, and the growth has been very slow; the company has been endeavoring to add to its public facilities; it has secured franchises for the extension of its track north of One Hundred and Twenty-fifth street through the Boulevard, and along the Kingsbridge road and across the Harlem up to the city line, which will be an additional 11 miles of railroad when completed; that territory is also one in which the running of cars for some time will not be profitable, but is a territory susceptible of great development and improvement; the importance of proper railway facilities has never been shown so well as when the One Hundred and Twenty-fifth street was changed from horse to cable; property on One Hundred and Twenty-fifth street quintupled in value, or quadrupled, and along One Hundred and Thirty-fifth street rose from three to five or six times its value, all along that section, and the territory is being built up rapidly, and that part of the road that did not pay for years is beginning to be a profitable investment.

- Q. If your passengers all rode the whole length of your road—A. It would not be very profitable; we could not operate; if we ran the cars in a continuous solid block under such circumstances we could not accommodate the travel.
- Q. You have considerable complaint on that line from the overcrowding of cars? A. We think not; we increase our facilities as rapidly as it occurs; we have some relief; we have a right by the Metropolitan Traction Company, not yet fully availed of, of

running west through One Hundred and Sixteenth street; then the new grant will carry us north to One Hundred and Thirtysixth street.

- Q. What is the Metropolitan Traction Company? A. I call the Traction Company the Metropolitan Traction Company; Mr. Vreeland told you all about it yesterday.
 - Q. It is the Broadway system? A. Yes, sir.
- Q. Your company is not connected with that one? A. Not in any respect; we have contracted for the purchase of a controlling interest in the Forty-second Street road, and which proceeds down the Boulevard and the Thirty-fourth street ferry; that makes the system a complete west side system as far as Forty-second street, and will give very good facilities, both to the east side and west; we intend to make that a continuous fare; that is not yet formally decided on, as we have not acquired the road yet, which will give 12 miles additional trackage, 12 miles of double track.
- Q. How fast do you run your cable cars? A. The law permits us to run south of Grand street at the rate of five miles an hour; north of Grand to Sixty-fifth street at the rate of eight miles an hour, and north of Sixty-fifth street at the rate of nine miles an hour; I think that is correct; the lower power house operates the slower cable south of Grand street; that is an independent cable; we could not operate any faster if we chose; first, because the streets are narrow; second, because the Second Avenue Railroad and other cars occupy the track on the Bowery and Chatham street, so we cannot run faster than the horse car line; north of Grand street to Sixty-fifth street the cable is operated from the Sixty-fifth street depot, and then an independent cable operates north to One Hundred and Thirtieth street from Sixty-fifth street, operated from the same power, so we really have three cables going at different rates of speed, the northerly one the more rapidly.
- Q. How does the traffic on your Third Avenue line compare now with what it was when you were operating by horse power? A. We have increased nearly 100 per cent.
 - Q. To what do you attribute that? A. To the better facilities
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that we afford to compete successfully with the elevated railway; that we are making approximately as good time as they are, without the necessity of climbing stairs, and we are running very comfortable cars, well heated, lighted with the Pinsch gas and the Gould heating system; there is a very great difference between the condition of the cars now run and five years ago; besides which it is easier and more convenient to take the surface road and the time is nearly as fast as that of the elevated.

- Q. You cross the Harlem river at some point? A. No; we go to the Harlem river and there make very close connections with the Huckleberry road with which I am now contracting for a running arrangement; that crosses the Harlem river and meets our cars at One Hundred and Twenty-ninth street and Third avenue; it is proposed to have them run when the new bridge is completed, into our One Hundred and Thirtieth street power house, and have through cars running from New York up to Morris Park.
- Q. They cross a draw bridge there? A. Yes; the new bridge will not be a draw; that will be an elevated bridge so that the transit will be continuous; the object of the new bridge is to take them above the vessels which will then make a continuous surface system from New York city to East Vernon on the east side, and on the other side to Geddes square and Yonkers.
- Q. Are you familiar with the detail operations of the road? A. Reasonably, from daily contact with it.
- Q. What sort of fenders do you use? A. One that is exceedingly satisfactory and has met with the approval of the Railroad Commissioner and has reduced accidents to a minimum.
- Q. Is that simply a wheel guard? A. Yes, sir; and it operates with perfect success; we have no difficulty in having it come very closely to the point of contact with the surface; the casualties are very few that would be avoided by a fender.
- Q. Have you ever had any accidents from cable stranding? A. We once had a wild car, I think, and then we introduced the system spoken of yesterday by Mr. Vreeland; we were the first to introduce it; Mr. Robinson was the one to devise it; we have signal posts at short distances with connection with the depot, so no

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more than one-quarter of a minute should elapse before reporting for a car; the system is becoming more efficient as men become more used to handling the grip, and the motion of the cars is becoming more steady.

- Q. What do you pay your conductors and gripmen? A. Two dollars and twenty-five cents for conductors and \$2.50 for gripmen.
- Q. Are your grips operated by a handle? A. Yes; by a leverage; we have, experimentally, one or two other devices, but we have not resolved on the change yet, we are experimenting with two or three methods.
- Q. What character of brake do you use? A. We have the Genet air brake, for which are now substituting another air brake; and we have had the ordinary brake system by the use of a lever; we are constantly experimenting with whatever is new, with appliances of that kind.
- Q. You believe it economy for the road to adopt the very best appliances of all sorts? A. Yes, sir; and there is nothing that appears that is not at once tested if it appears to have any merit; Mr. Robinson, our superintendent, has patented nearly all the devices used in the cable system, and is probably the best expert in the mechanical work pertaining to cable roads that I know of; we are trying to keep to the fore in all improvements.
- Q. Do you have any complaints from the lighting or heating of your cars? A. Not the least; we have the Pinsch gas system; I am a director of the Pinsch gas system, and a thorough believer in it; in respective heating, we have as good as any, the Gould heating system, which does away with the necessity of a stove, with a contrivance in one end of the car; the heating is done from the outside under the platform, and it worked very satisfactorily last winter, even in the coldest days we kept the temperature from 65 to 70 with ease, and so far, that device has been as satisfactory as any, and is the cleanest and neatest; it is absolutely without dust or dirt.
- Q. I think you said your direct operating expenses were 60 per cent. of your gross receipts? A. That appears to be the case last year, which was a little less than the year before; much depends

on the price of coal and such matters; the companies have all been more liberal in the payment of employes since the cable system has been instituted; the conductors and drivers never received over \$2, and eight years ago, received \$1.60.

Q. How long is the work now? A. It is limited to 10 hours; we limit it to the statutory time; about 10 hours' work for \$2.50 and \$2.50, which, of course, adds very largely to the cost of operation.

By Mr. Nixon:

- Q. Do you pay by the hour or the trip? A. By the trip; a day's work on the Third Avenue is five round trips; on the Tenth Avenue, nine, ond One Hundred and Twenty-fifth Street, 18; I have the average number of trips if you want that; on the Third Avenue we make 286 runs, which is equivalent to 150 full-day trips; Tenth Avenue 76 on One Hundred and Twenty-fifth Street; actual number of trips on Third Avenue, 1,080; actual on Third Avenue, 921, which is divided into 474 on Tenth Avenue, and 447 on One Hundred and Twenty-fifth Street.
- Q. You have got a brake in use on that line, Mr. Lauterbach, that when applied makes a peculiar and a sort of terrific noise; do you know what that brake is, what the name of it is? A. We did have a Genet air brake; that is the blunt patented brake we have in use; that is being replaced by another brake; I should rather Mr. Robinson should speak to you about any question regarding the mechanical appliances; whatever there is in that way is always remedied as soon as it can be done; for example, our brake originally placed under the car on Third avenue under cable service were very noisy; those are all replaced and they are actually noiseless; now, we replaced these with one set, and those not being satisfactory were replaced with another; you will observe the operation of the road is very much smoother and easier than it was a year ago.
- Q. Mr. Lauterbach, do you think the law ought to permit a railway company to water the stock of a company to any extent that the stockholders see fit; in other words, do you think the law

should prescribe some restrictions on that or place it within the power of the Railroad Commissioners to give direction or assent? A. Well, no one is obliged to buy railway stock: I do not know of any statute that compels any man to invest in railway stock; that is a matter of option; anyone can do it or not do it; in the construction of railways there are tremendous risks which never would be undertaken unless the opportunity for profit was coincident with the investment; take, for instance, the elevated railway system, if any men had been obliged to put their money into elevated railways with the prospect of getting no more than six per cent. for their bonded investment, for which they paid 100 cents on a dollar with 6 per cent, on that investment in the stock without getting any dividends, and that filed on that investment, no one would have made the investment: 99 people out of 100 supposed the elevated railways would prove a failure, and no one in New York would touch it; it took D. O. Mills from California, and Pullman of Chicago, and Navarre from Cuba, to build your elevated roads; anyone should have the opportunity, liberal opportunity of making money, in case it turns out a good investment; take the Brooklyn Elevated Railroad here; building that in Brooklyn through those streets, it was the laughing stock of the community; no Brooklyn man would put in a cent, and the New Yorkers put in the money for the bonds, and I suppose some of the stock might be said to represent water; if that had not been permitted you would have no elevated system in Brooklyn.

- Q. You know the law already requires, if you wish to increase the stock of your company, that you acquire the assent of the commissioners? A. Yes.
 - Q. Under the rules which the board may prescribe? A. Yes.
- Q. And you must set forth some reason for the increase? A. Yes.
- Q. Is there any greater reason than that? A. None, except this, except when you go to ask for an increase of stock, that your original project has been carried out, and you desire more money and can show a satisfactory reason; you can go as we did for increase of our stock from \$2,000,000 to \$9,000,000; we say we re-

require from \$3,000,000 to \$5,000,000 for completing this road; it will cost us so much, and we submitted our estimates; the same reason does not quite apply as to what the company should be permitted to do at the inception of the enterprise; who can here be injured if there is watered stock; not the investor, because he knows what he gets; not the State, because it receives its percentage upon the earnings, its percentage on dividends and the taxing in the city is unaffected by the watering of stock one way or the other; under the former system it was an advantage to have large stock, at present it does not make any difference; it might be said companies can go along and not pay dividends on their stock; the law is very clear on that subject now, the right of the road to limit fares where more than a reasonable earning capacity is concerned; you earn more than 10 per cent. and then it is a question for the road to say whether there shall be a limitation of fare; that is the only spot I think the State has any interests and its rights are perfectly protected.

- Q. To illustrate who may be injured by it; here was the Long Island Traction Company organized in Virginia? A. Yes.
- Q. With \$30,000,000 capital stock issued on the payment of \$500,000; that is, 15 cents on the dollar and the stock very soon went to 60, and a good many people were induced in some manner to purchase it; of course, they were acting under their own free will, but the next they knew the company was in the hands of a receiver, and the stock fell? A. Yes; they are doing the same thing to-day, they tell me, in Cripple Creek, and I suppose some men may be fools enough to telegraph for stock that is of no value; no one need do it; there is no compulsion about it; they evidently were impressed with a notion that a change of the cars from horse to electric traction was going to be enormously profitable, and thought that they would make the venture; I tell you where I think a check could be made; they induced the Legislature to take away the restrictions from the Cantor act from Brooklyn that allowed the franchise to be given away; what difference there was in respect to the cities I have always been unable to perceive; while New York was engaged in taking down poles and

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wires in that city, six to eight years, they permitted wires to be erected in the city of Brooklyn; it did look as though permission to run an overhead trolley through Fulton street in Brooklyn was going to be of tremendous advantage; there was where the vice was; I do not think there was anything vicious in issuing stock which people went into speculatively; there obligation in Brooklyn to run through different streets; only rivalry between companies can do any good; it rests with the local authorities to give it to whom they were a mind to; franchises have been granted without putting them up at auction; why, the Cantor act has been taken away from there—

- Q. The Cantor act has received a sudden jar over here recently? A. I do not think the Cantor act covers the case properly; I do not think the method prescribed is a proper one, and the Legislature should look at this matter with great care; there should be legislation, I think, on the disposal of franchises, but it is not to be made by taking away all check; I think that more important than the watering of stock; in the watering of stock I do not see how anyone can be insured in any enterprise; people are guillible and the State can not protect them, and if you go too far you get the result you have in Texas; there they have a law against enterprises not represented dollar for dollar of stock and the result is that railroad building in Texas is stopped.
- Q. Why should a railroad corporation be given privileges of issuing as much stock as it sees fit and for whatever it sees fit, while a manufacturing corporation is only permitted to issue stock for actual stock, for actual cash of fair vlaue? A. I do not see where there should be any difference; you start a manufacturing company and you get a patent or something, and you turn that in for stock, and it is as much a myth as though you gave nothing for it.
- Q. If that is true you and your co-partners become liable? A. The evidence of their mythical value is of great doubt; many of these companies are created for the purpose of purchasing patent rights.
 - Q. There is not any good reason for granting especial privileges

in that direction to a transportation company? A. Except that the policy of the law has been to encourage investment in whatever is for public business; in order to accomplish that there has been latitude given to those who have been willing to make those ventures; now, nearly every railroad enterprise in this and other States, the original enterprise, has not been ab initio; now, building a street railroad in a great city, along a great street like Broadway, there is no risk; but I mean the general railroad projects that present themselves, and they are attended with more or less hazard; you do more liberal things than that by a good deal; take your underground project in New York; your proposition to do there is far beyond permitting a company to issue its own stock; you propose to create a franchise and turn it over to a private corporation, and then allow that corporation to issue \$50,000,000 of bonds and have the city guarantee them, and if there is a loss the city loses it, and if a profit it goes to the corporation issuing the stock; that goes a great deal further than allowing a private corporation to issue stock on its own venture.

- Q. Here is the Dry Dock, East Broadway and Battery Company; if I retain the figures in my mind accurately that road stands on the books of the company to-day, a horse car line, not any too good at its best, charged with \$530,000 a mile? A. Of securities?
 - Q. Yes; there is \$12,000,000 of stock? A. Yes.
 - Q. And then \$250,000 of bonds, and then they issued certificates of indebtedness and divided them up amongst the stockholders, \$1,200,000, making \$2,650,000? A. And their real estate does not amount to much.
 - Q. I think the official that was sworn here said he could reproduce the whole thing for \$250,000? A. That is a very large capitalization; but whom does that injure?
 - Q. I will tell you; in the first place, the law requires them to pay a tax to the State for dividend tax; they have cut that out by the certificates of indebtedness? A. That should be an easy problem for the Comptroller to solve.

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- Q. They say that he has solved it by saying it is not taxable? A. I had rather not go into the history of other companies.
- Q. I bring that up to get your ideas if there ought not to be some check in this somewhere? A. If a scrip is issued representing an indebtedness that is no indebtedness and dividends paid that represent something you must excuse me for going into criticism of the road; that would not be just; take the Third Avenue I represent, and they have \$5,000,000 of bonds and \$5,000,000 real estate bought and paid for, and nearly \$9,000,000 of stock, and you can not replace the improvements for any less; that represents actual value.
- Q. Is not your company, as a company, in better shape to-day than it would be if the capital stock stood at \$45,000,000? A. I think our method has been a good one; I am a great believer in Third Avenue stock on account.
- Q. The fact that it is selling for 190 shows your method is a good one? A. Yes, sir.
- Q. And the fact that you have increased the patronage of your road practically 100 per cent. is considerable evidence that you are pleasing the people who patronize it? A. Yes, we are.
- Q. But I am talking about this, irrespective of the earnings of your road, and as a general proposition; you have a company here whose outstanding obligations represent a payment into the treasury of 100 cents on the dollar? A. Yes, sir.
- Q. In your judgment is your company in better shape by reason of that fact than it would be if it had issued three or four dollars for every dollar paid in? A. It has so turned out; people in 1873 were willing to take ventures that capital is not willing to take today; take this very property of which you now speak; it was in great jeopardy for many years; take the Kingsbridge road we are going to develop; it is a question how rapidly it is going to be; I do not know that if we wanted to increase our capital stock beyond the actual expenditure that we will be entitled to in the building of the road that we should not be permitted to do so; it is going to be quite a question; we are going to pay a large per-

centage to the city, and the whole thing is something of a question.

- Q. You pay on that; you bid that franchise in? A. That was where a company had no right to bid against us, and ran up our bid to 38 per cent.; there will be interesting questions arising in respect to that matter; it lay within our territory and we bid it in.
- Q. You say if your Third avenue line was paying to the city 38 per cent., your Third avenue would be extinct? A. Yes.
- Q. This has gone to the ridiculous there? A. Yes, sir; absolutely ridiculous; the other day there were bids of over 7,000 per cent.; the Cantor act has got to be changed.
- Q. What should be put in its place? A. Either take a lump sum as you did with the One Hundred and Twenty-fifth street road here is this road; what am I offered for it, and you get the best price you can, or sell it to the person who offers to run for the lowest rate of fare; how much will you carry for, five, four or three cents, whatever it might be; there is nothing ridiculous about that; perhaps they would get that down to nothing.
- Q. Which do you regard the better method? A. I should like to think about that; I would like to confer with the committee if any legislation is to be had, whether reduced fare or graduated reduction, or by the payment of a lump sum; but as you say, supposing we were entirely independent of paying that and bought the Kingsbridge franchise, we could not build it.
- Q. Irrespective of the percentage, let us talk on the question of stock; suppose the Third avenue had nothing to do with the Kingsbridge franchise, and the new corporation desired to build that road and your rule was that every dollar must represent every dollar, no one would build that road, because he could go and take his hundred dollars and go and buy a 6 per cent. bond at 108 or 110, and 5 per cent. at par, and he would have a sure investment; here you are inviting people to take risks, and you must give them a chance to make profit, and if you cut them off you will have no improvement.

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- Q. There is no man who embarks in business in this or any other country who does not take some risks? A. He is willing to take the risks providing he can have the profit, but if you limit the profits to an investment only, he will take no risk whatever and he will get something that is fixed and stable; but you must not cut him off.
 - Q. They take risks if they buy bonds? A. I do not think so.
- Q. Take the Third Avenue road, and you buy a franchise, paying 38 per cent.? A. You can not injure that bond; that bond will be worth 122 or 130 as it is to-day; it is a lien on the franchise; we can not affect the value of that bond; that is good forever.
- Q. You can not impair the securities of that mortgage upon the property as it was when it was given? A. No; that is safe; there is no venture there; you can say to a man, you pay dollar for dollar, but if he takes a risk you must allow him the profit; I do not mean to say the thing must be absolutely unlimited, but I am confident you never would have had an elevated road in either city if they would not have issued stock without payment of the money, if it had the chance of representing the profit; that sounds reasonable, does it not, Mr. Wade; I do not want to be communistic in that respect.
- Q. There probably is no doubt about it; I do not want to argue it, but simply get your idea, because you have had great experience; now you take the issuing of bonds by a company, by a railway company, and to-day the company itself is a law unto itself? A. Yes, sir.
- Q. It can make the issue just as large as it sees fit, and sell the bonds at any price it sees fit? A. Yes, sir.
- Q. And sell it to the stockholders or directors individually? A. Yes, sir; that can be done.
- Q. And in that way your Third Avenue line could be put in a position where it could not pay a dividend on the stock? A. No difficulty about doing that if anyone had so inclined; of course, you would have the assent under the law as it now is, consents of the stockholders to the issuing of the bonds; it could not be

done willfully by the directors; the stockholder would have to do it as against himself.

- Q. Yes, and the stockholder make the purchase? A. If he chooses to take one piece of paper as against another, he can.
- Q. In this instance you and I own just a trifle over two-thirds? A. Yes; it might be unfair to the one-third; in no case has that been done; if you and I represented ten shares in any company we could stop it.
 - Q. We would have to invoke the aid of the court. A. Yes, sir.
- Q. We would say this is within the letter of the law but not within the spirit; I am not able to take any stock; the value of my stock is being impaired, and the two-thirds who represent the repugnant interest and are getting an advantage over me, who have only a one-sided interest; I have seen nothing of that kind; certainly not in this city; there are some times abuses in the way of leasing properties, but even those can be checked; the railway situation in New York is very conservative; very fair; the securities of New York railway corporations are all in good standing, and the law which gives the Railway Commissioners supervisory powers in any direction, seem to have worked admirably; the question of what to do with the sale of franchises—
- Q. Are you familiar with the operation of roads in foreign cities to some extent? A. No, sir; only from reading; I read Mr. Shaw's testimony the other day, and I have read Mr. Shaw's book and have some little knowledge.
- Q. Do you know what rate of fare is charged on the Glasgow road? A. My impression is, from reading this book, that it was twice as high as it was here; that the Glasgow chaps would open their eyes with astonishment if they could ride 20 or 20 miles an hour for 5 cents; I think the rate of fare was 3 or 4 cents; I did not observe that there was any gain by municipal ownership; it seems to me this would be it, if the municipality went into the railroad business, it ought to go into it altogether or not at all; if the municipality owned the railroad and could fix its rate at 1 cent or any other price, it would be unfair to the other railroads that could not do that; assuming you wanted to buy all

the roads in New York, and I do not know of any nicer political power than that, based on the administration, that had the operation of those roads; I think all the departments of public works and all the others would not be a feather-weight in comparison with the power they are given; if, on the other hand, you lease them, there is nothing gained by it; the lessee would either make money out of it or would not take it; if he made money the city would not; there would be no advantage; in this country we have not got to the condition of wanting the government to indulge in enterprises of this character; on the other hand, we wish to excite individual enterprise; if the city is going into this, underground railroad is a good thing to start on; I do not believe in this country the notion of having municipalities going into transportation business would meet with much encouragement nor would the public be benefited; I think the Third Avenue should be managed by John H. Robinson, as an individual, and would be better than it could possibly be under any political administration; we have no paternalism in our system of government to justify such things; they do it in Berlin, and do it pretty well, but the systems are different; the New York superintendent of street railroads would have the appointment and discharge of 40,000 employes in this town, and would be a powerful political factor.

- Q. What do you think, Mr. Lauterbach, of a system of transfers throughout the entire city on the surface street roads? A. I think it would be beneficial to the public; it would be of great service to the public and would be of apparent benefit to the railway corporations; but I think that those who are indulging in it, as far as they are, are not making much money by transfer business; take the 30,000 we transfer on a Sunday, who bring us $2\frac{1}{2}$ cents, the Dry Dock and Battery are the other $2\frac{1}{2}$, and I doubt whether the service is paid for; whether we make any money out of it; with the general transfer there would be an apparent prosperity; there would be a tremendous boom to the public, no doubt about that, but I doubt whether a railroad could stagger under it.
- Q. The Dry Dock seemed to be staggering along under it? A. I think we assisted them materially; I think the fact of our taking their passengers is great advantage to the Dry Dock road.

- Q. I do not know where it will go then; they have paid 8 per cent. A. They have been transferring only a year.
- Q. You say it is beneficial to them? A. Because they have a very short haul and we the long haul.
- Q. It increases their business? A. I think I was wiser than the rest of the company; I wanted the arrangement made on a mileage basis or not at all; our people were more generous and they put it on an actual division; they get one-half on 10 miles and we get one-half on 10 miles; we did that experimentally; it has operated to the advantage of the public and the Dry Dock.
- Q. Your road is not good for anything except it is advantageous to the public? A. The public is first; that must be first; the railroad doing business in a great city must keep the public interest in mind first; if it does not it can not do business.
- Q. It can not operate successfully unless it does? A. No, sir; it can not; the competition now is sharp and the company that wants to hold its own must do so.
- Q. Wouldn't you regard it highly beneficial to the city—the future of the city, if all these surface roads—it is no different in New York than in other cities—were operated upon such a basis as would bring its capital a fair return for its investment and labor, good wages for its employment, and no higher rate of fare charged than would meet those things maintaining the road after the fixed charges, and so forth? A. You must always give sufficient inducement to make capitalists invest by not restricting possible benefits that can accrue from an investment too arbitrary, else public improvement will never take place; if there was not the feeling that the 1 cent between 4 and 5 cents was where a margin of profit comes in—because that is where the margin of profit comes in in that 1 cent—if you insisted on keeping it down to 4 cents you never would have had the splendid system you have in this city.
- Q. You disprove that, it seems to me, with your own road; you have a road here in good condition, operated nicely, in favor with the people, and every obligation issued represents 100 cents paid into the treasury? A. You must remember that the Third Avenue

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railroad ran through the main artery of the city's travel in those days, and yet you must bear in mind you could not dispose of that company's stock for 10 cents on a dollar for years after the scheme was originated; if you had had some law on the statute books at that time, as soon as the 5 cents was a profitable investment, you would take it from the road; you never would have had the road built; you can not play "heads I win and tails you lose" with the capitalists and hope to succeed.

- Q. That has been going on all over the State successfully, for most of the roads are built with the bonds and stock issued for nothing; if that is not "heads I win tails you lose" I do not know the game. A. I have not had much experience in that sort of thing; I have studied the elevated railroad, for example; they are not yet earning any dividend on the stock in Brooklyn; their bonds represent actual value; if they had not had the opportunity to issue their stock that road would never have been built; it may be twenty years hence that stock may be a good investment; it would not be fair to look at that stock then and lose sight of what has taken place in the years before; there is no approach to the payment of a dividend on that stock; during the period, not very remote, it was close sailing to meet fixed charges; I am a director of that company, and Mr. Uhlman appeared before you; they go on and take these chances and extend their road; if you limited their fare they would not make any extension; their road is extended voluntarily from 7 miles to 21 miles; they have extended 14 miles, perhaps, 5 miles of which are not paying anything, but the territory is being built up and that is done by reason of the fact that your law is not too restrictive.
- Q. Another thing is conducive to that; people do that in anticipation of that district growing up and making it a feature. A. They do not do it altogether from a humanitarian interest; they have a little self-interest in it; what I mean is, New York city can afford to have reasonable lattitude in its laws; it does not want to say some one has made a great profit on his investment and I will see no one else ever does that, and I will render it impossible; you will deter anyone else from making the experiment; you take

the elevated railroads in this city, and no one would touch them; you could not get a dollar's worth of capital invested.

- Q. It is the same with any other industry? A. Yes; the private individual has no check placed on his investment.
- Q. You appreciate there he puts behind it everything that he has? A. He does not always put behind it all that his wife has got.
- Q. He does when his wife goes in with him? A. Of course, it wants a deliberation and consideration; there should not be the opportunity to do the public any injury; but I do not think the speculative investor is a man going to be kept out of foolish investments by legislation; if you dry up the sources of railway securities for him to dabble in, he will get at something else; he does not ask your protection; he takes his chances and makes his losses; if the theory of Dan Lewis and others had been available, people who bought that stock at 30 might have realized 60 or 70, and there would have been no harm in it.
- Q. You started at a very inopportune time? A. Yes; and perhaps was not designed very wisely; but still a man's hindthought is better than his forethought.
- Q. There is a question about this that is interesting; these franchises belong to the public, and whether they should be disposed of for the purpose of revenue only, or whether they should be disposed of and take care of the poorer classes in the best manner possible, is a question well worth anyone's consideration? A. Certainly; I volunteer to say so; whether the question of disposing of a franchise should not be made to the one that would give the lowest rate of fare; I do not think the present system is by any means ideal, even where the Cantor act is operative; I think that needs careful consideration; what do the municipalities give them; they do not give the property; they give their consent, and property owners give the rest.
- Q. You do not pay unless you get it completed? A. No; that part of the law wants amendment.
- Q. You know our Legislature is being flooded with every shape of opinion upon these questions? A. Yes, and much of it very

plausible; but all that must be looked at from a practical standpoint, and with proper regard for the future.

Q. I do not think of anything further, Mr. Lauterbach, unless there is something you wish to say for yourself? A. No, sir; I am very much obliged to you for your courtesy.

Lawson N. Fuller, called and sworn, testified:

By Mr. Wade:

- Q. Where do you reside? A. One Hundred and Fifty-fifth street and Tenth avenue.
- Q. And in what business were you engaged? A. I was in the sugar business twenty-five years; laterally, more or less in real estate.
- Q. Are you and have you been interested in any of the street railways of the city? A. All of them for the last fifty years, but not financially; I have never owned 100 shares of street railroad stock since I have been in the city.
 - Q. When I say interested, I mean pecuniary? A. No, sir.
- Q. Is there something you wish to say? A. General impressons for the benefit of the city?
- Q. Go on in your own way and tell the committee, and give your valuable experience? A. I have lived forty-one years on Washington Heights, and I have worked that entire time for public improvements in the way of railways and bridges, etc.; first, to advocate the Washington bridge, and I insisted on the extension of the Third Avenue Railroad up there; they had their charter twenty years before they built the road; an old organization, the New York Railroad Company, grid-ironing the city of New York with 70 miles of cable road; I took a trip to Chicago to see if their railroads were adapted to the city of New York, and came back and advocated the building of 70 miles of road, and cabling Broadway at once; you gentlemen are familiar with the public discussion on that subject; at last we got the Broadway road cabled; they paid \$150,000 to the city of New York for the right

to run that road; it is a large price to pay, and still they have added to that about 120 miles, and they are still desirous of adding many miles more to their system, as is the Third Avenue, and I maintain any corporation that will build any railroad through territory on Manhattan Island, or the annexed district, should be allowed to build it; in other words, no corporation would build a railroad unless they thought it would pay in the end; the feature of all legislation in regard to railroads has been to retard the building of roads; from Fifty-ninth street to the city limits, we have been limited for years to the Eighth Avenue on one side and the Elevated road; as Mr. Lauterbach said, if there is to be any restriction in regard to issuing bonds and stock you would have very few railroads; Commander Geddes, of Yonkers, sunk a million in a railroad experiment, and when the stock went down to a dollar, Cyrus Field wrote to me a letter-I make this statement as a by-allusion—asking me to call at his office; he said I understand you are an advocate of elevated railroads; I can buy a controlling interest in the New York Elevated Road for \$150,000: if I can buy it will you put your services against my interest; and under him got Peter Cooper and Marshall O. Roberts and two other men to put up \$50,000 each; the day Moses Taylor said, I shall back out; I might as well throw my \$30,000 in the North river as put it in, Mr. Field informed the other men and they all backed out; then he said, "Mr. Fuller, will you stand by me until the elevated is an accomplished fact, if I will go it alone?" I said, "I will do it;" I remember he said at the time, "I will make a million and a half or lose \$150,000; if I make a million and a half the public will say I am a damned rascal; if I lose my \$150,000 they will say I am a damned fool; I think he was almost convinced that he was more than likely to lose his \$150,000, but he was a remarkable man, one of the most remarkable men I ever met; and if you knew the amount of labor I went through to start that elevated road it would hardly be believed; there were fifteen injunctions against it; we called public meetings and went for the injunctions; the first was patent injunctions and we knocked them out, and all the rest went with it; Mr. Field commenced the work, and the elevated road was built from the Battery to One Hundred and Twenty-ninth street in less than twelve months; it stopped at One Hundred and Fifty-fifth street; that is the street I live on; Mr. Field said he felt bound to build it to my street anyway; the city of New York to-day, up to this time, has lost hundreds of millions of dollars on account of the opposition to the elevated road; property increased twelve years after the elevated was built to One Hundred and Fifty-fifth street and One Hundred and Ninth street, through the four wards through which it is running, to the value of \$330,000,000; in the entire system, \$570,000,000; in the ward in which I live the increased valuation of property was \$18,000,000 lower the year before the elevated railroad started than they were the year before, and the twelve years succeeding the enhanced value in the Twelfth ward has been \$142,000,000, an increase of \$12,000,000 a year for twelve vears.

Q. Is that taken from the assessment roll? A. Yes; in the Twelfth ward alone, \$142,000,000; in the Nineteenth ward, \$103,-000,000; in the Twenty-first ward, I think \$19,000,000, and in the Twenty-second ward, \$65,000,000; amounting to \$330,000,000 in these four wards; in all the rest of the city's twenty-one wards, \$168,000,000; more than double in the four wards through which the elevated railroad is running than all the rest of the wards; now, that seems almost incredible; we have been endeavoring to get extensions of the elevated roads, and we have lost \$250,000,-000 on account of the opposition in the Twelfth ward alone; what does that increased value mean to the city in taxes, besides the deprivation of the use of the road? I want to state that there is no system that has ever been invented for the public like the elevated system; I indorse about every word Mr. Lauterbach said. except in one respect, and that is that the speed of the cable road is approximate to the elevated road; now, I live at One Hundred and Fifty-fifth street, and go down to Bleecker street in thirty-two minutes; when they extended the cable road up there, and I took the cable in front of my house, and I would have a cable at each end of my house and the elevated in front, and I went from the cable down Tenth and down Third avenue to the post-office, and it took me just an hour and twenty minutes, about fifty minutes difference between the cable and the elevated; there will always be that difference; it is through no fault of the cable; any road running on the surface will be retarded.

- Q. To do that you have to take the express train? A. Yes, sir; the other trains take from forty-five to fifty minutes; and then there is another thing in the elevated road; the conveniences are superior to any other conveniences; there is no question about that; the very test of the thing is the number of people that they carry; that road, up to September 30, 1894, carried 2,222,722,842 passengers without the loss of a single life.
- Q. In that year? A. In the entire time; and they have carried as high as 1,145,000 in a day, and 2,846,000 on three days during the centennial, without the loss of a single life; look at the cable system; they have accidents most every day; now, while I appreciate everything the Third Avenue has done, I remember when they could not buy a single load of feed, and that little man Hart is entitled to a good deal of credit in placing the road on the basis it is; as Mr. Lauterbach says, it is a very valuable franchise, but when they go into the country six or seven miles they will lose millions of dollars before they make anything; and, as he says, people will never look back to see that; the city of New York is growing, and we want rapid transit to develop this city and to increase taxes and assessments; we need an increased valuation in property, and that is the only way to do it, to meet the increased expenses; which is the best system? I maintain the underground trolley and the cable are the best roads for the service, and no other road except the elevated for real rapid transit; as a property holder I think this underground system is the greatest outrage ever attempted on any city; if it ever succeeds in building one mile of road, before it is completed to the city limits, instead of \$50,000,000 it will cost \$125,000,000, and no one will ride on it; all the testimony we have from all parts of the world agree that people will not ride on it; 125,000,000 passengers in London, and the same year we carried 215,000,000, with two-fifths the population; that

shows; supposing this underground railroad is built, it will cost \$100,000,000; the city furnishes the bonds, \$3,000,000, and 1 per cent. for commission; that is \$4,000,000; supposing they carried 100,000,000 of passengers and 60 per cent. operating expenses is \$3,000,000, now where is your interest for the \$4,000,000; having been a mason by trade I can calculate as well as the engineers; I knew what it cost to build the viaduct in the Washington bridge; I said it would cost between \$2,500,000 and \$3,000,000, and it cost \$2,850,000; they said \$5,000,000; you take double \$66,000,000 and you can not build the underground system; the least possible loss will be \$2,250,000,000 a year if they do not carry more than 100,000,000 of passengers; as Mr. Lauterbach says, what advantage do we get; you can not find a man that will run it; if he makes money he will run it, and if he does not make money the city has the road at a loss of \$2,250,000; I say that means bankruptcy to us; we want a road that will enhance the value of our property; a man said to me, "If they build the underground railroad I will sell my property; do you suppose I will ride in an underground railroad that distance; if you want to legislate any for the million do anything you can for the elevated or trolley or cable roads, and nothing else;" I have had 50 years' experience in this, and know it from "a" to "z," and been in the discussion of all public improvements and should know something about it or go back to Vermont where I was born; I come here in the interest of the public; to put shop boys and girls and merchants and lawyers to ride back and forth underground would be a perfect outrage; you never will develop the upper end of the island; extend the elevated road just as far as you can build it; why didn't they build it further; simply because people bring damage suits; they paid millions of dollars damages; I know one man that got \$35,000,000, and he said his property was doubled in value; they never made anything out of watering stock; they put in this \$15,000,000, and the stock went down to about 80; if you water stock it will go down; there is a practical, common sense view to take; you would have no roads unless they had the privilege of watering their stock.

Q. They got the Third Avenue without that? A. They are just

beginning now; they are compelled to bid off a road now; for instance, when the board of aldermen voted the franchise to go up the Kingsbridge road without a dollar, and I said it was worth \$280,000, and went before the mayor and they had another hearing, and the Metropolitan said we will give \$100,000; Mr. Lauterbach got up and said, "We will give \$280,000 bonus," and they did; when this Broadway franchise was given, in 1884, to Jacob Sharp, without a dollar consideration, I offered the city a million dollars for it; I believe in the city's getting all they can for their franchises; no man is compelled to buy any railroad stock or electric or sugar stock; a man's hindsight is wiser than his foresight, and I think many men can testify to that; you can not regulate those things by legislation; it is utterly impossible; I say, give railroads, and corporations that build them, every opportunity they ask for, because first they must look to making money for themselves and their companies, as it turned out in the elevated railroad companies; Cyrus W. Field made a fortune out of it, and he lost his fortune in the elevated road; Cyrus W. Field pledged his word to me when he went into this enterprise that he would build the road up to Kingsbridge in a certain time; during a session of the Legislature Thomas C. Eggleston introduced a bill reducing the fare to 5 cents; after that they said, if you want to build at that rate you may; they had appropriated \$2,250,-000 to build the road and they abandoned it; if they had had brains enough to have let them build the road and then reduce it there would have been some intelligence in it; they had already reduced the fare 50 per cent.; that stopping of the road has robbed the property owners of at least \$1,000,000,000; there is a spot without railroads to take people up and down; I advocated the Washington Bridge, not because it was to impose a debt upon the city of New York, but I said lots selling for \$1 would sell for \$10,000, and they have sold for \$12,000; what I came here for and I beg that the Legislature and this committee report nothing that will embarrass the cable roads or the elevated roads; Mr. Lauterbach, like myself, believes in cable and electric and elevated roads; he does not believe in underground railroads; they

have not paid in Europe, and if they have paid the topography of the country is different; London is all tied up in knots and streets; take this island; it is an unknown quantity what it will cost; here is our viaduct bridge, costing \$2,250,000; I do not think you could build an elevated road — costing less than one-half the underground railroad costs —

- Q. About what does this elevated road cost per mile? A. About \$750,000; it depends a great deal on the rock and sewerage and foundation.
- Q. You do not make much excavation? A. My dear sir, go to One Hundred and Tenth street; take from Fifty-ninth to One Hundred and Tenth street, it costs more than a million a mile; there are foundations there 40 or 50 feet deep.
- Q. Foundations for what? A. For the piers; it reaches down 45 feet, some of them, at One Hundred and Tenth street.
- Q. How large are they? A. I do not remember distinctly, but they must be 28 to 30 feet; and they drive piles in many places; there is another feature for their adding that \$13,000,000 of stock to the road that people lose sight of; if you remember correctly iron, lumber and bricks and mortar were way down; bricks \$3.50 a thousand, lumber down to bankrupt prices, and they built the road in those bankrupt times; when you build when brick is worth \$3.50 and brick goes to \$7.50 you have a right to advance the price of your house; Cyrus W. Field told me the road did not begin to cost what it would later; the New York line was worth double what the Sixth Avenue did; the Legislature told them they would give them two weeks to merge or they would compel them to.
- Q. The Legislature had not any right to do that? A. Yes; because they thought it would jeopardize public health.
- Q. They did merge? A. Yes; they were compelled to merge; and the New York Elevated said they wanted \$6,500,000 difference in the value of the road with the Sixth Avenue, and the only way they could settle it was by allowing the Sixth avenue the same price.
- Q. You made one remark that the city ought to get all it could for the franchises? A. Yes; I think there is a simpler way.

- Q. How? A. Putting them right up and let any party bid on them.
- Q. Who has got to pay for it in the end? A. Why the parties that bought it.
- Q. What? A. Why, the party that bought it; the one that bid; I would be benefited if they would build a road up Tenth avenue; it would double the value of my property.
- Q. Very likely; that is eventually to come out of the patrons of the road? A. The patrons of the road are the property owners.
- Q. The property owners do not do it except by patronizing the road? A. They pay it, but they have received their benefits.
- Q. Yes; but where is the fellow that works down town for a dollar or a dollar and a half a day, with a pick and shovel, where is he benefited? A. His convenience and the healthfulness of riding on an elevated road; and next, getting out into the country and buying a little cottage for two or three thousand dollars; and without the elevated road he could not do anything of that kind; he is to be considered just as much as a millionaire.
- Q. Instead of having our eyes set upon the subject of revenue all the while, is it not worth while to devote our attention to him a little? A. You can not have public improvements without revenue.
- Q. I know that. A. Supposing they should assess me; they have as much right to assess me for building public improvements and elevated roads as for cutting down the street.
- Q. You would if the city built it itself? A. Of course they would; and assess me to bankruptcy; that is the reason I protest against it as a property owner.
- Q. You go down town amongst any of those large business houses; take H. B. Clafflin & Co., and it is running its vehicles through the streets in every direction; and carting its goods without the payment of a single cent for the use of the streets, except as it pays its taxes in proportion with other taxable property. A. Yes, sir.
- Q. Here is a man that needs the use of the street to get to his work? A. Yes.

- Q. And he can only get to that by reason of the city having permitted a transportation company to build a road through it? A. Yes, sir.
- Q. And he has to be charged enough for that fare so the city gets a revenue all the while? A. Yes.
- Q. Do you think it is treating him the same as Clafflin & Co.? A. Yes, because he would not have any work except for Clafflin & Co.
- Q. They wouldn't have had anything either? A. Capital can take care of itself; the Almighty has regulated that; a man with \$150,000,000 would take a good while to starve.
- Q. If there was not some toiler to labor for something he could not live on it? A. That is a question I have challenged Servent and all those fellows on and they won't discuss it; I maintain there is no man in this country without extravagance but what can support himself; when they go into —
- Q. That is not quite the subject; I am trying to attract your attention to the class of men who are willing to work and trying to rise, and if you can assign any good reason why that man should be taxed for the benefit of the city I would like to know it? A. It is for the benefit of himself.
- Q. If you can assign any reason why he should be compelled morning and evening to pay into the treasury of the city any sum whatever for the privilege of riding? A. Just as much as I pay the city of Buffalo for the privilege of holding my property; just exactly; these facilities are given him.
- Q. Then why don't you tax everyone for driving through the streets and go back to the old toll system? A. Because people would prefer that other people should ride, and they ride themselves; that would not be civilized.
- Q. It was one time? A. I know, but that has gone by; we did not have elevated roads 25 years ago; who would want to go back?
- Q. Probably no one. A. My dear sir, we used to use oil lamps in the street; we are willing to be taxed for a better system now;

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our park commissioners have gone back to naptha lights; you go to Cleveland and you can pick up a pin.

- Q. Unless the lights go out? A. We all go out one of these days.
- Q. Your notion is this, that the city morally has the right to exact every dollar it can for one of these franchises, either in a gross sum to start with, or from year to year? A. That is very simple, my dear sir, just as you would buy any other goods and go into business; put up the franchise at auction, and let the man paying the highest take it.
- Q. In order to have that operate they have to go to the public and he must be successful in its operation? A. Yes, sir, and he would not bid unless he thinks he will be.
- Q. No matter whether he is mistaken or not, if that is a suitable road, accommodating the public, it must be run successfully? A. Yes, sir.
 - Q. From a financial standpoint? A. Yes, sir.
- Q. If it can be just as desirable and relieve the laboring classes as far as possible and not take a part of their earnings and put it into the treasury, wouldn't that be as beneficial? A. How could that be done?
 - Q. By a reduction of fare? A. You can not do that.
- Q. It is being done in many places. A. If you go to reducing fares below a paying price, as Mr. Lauterbach says—
- Q. I do not say below the paying prices? A. Do you know what is a better theory; competition regulates that thing and I want to say to you gentlemen there is nothing like individual enterprise.
- Q. Do you see where you stand, one tearing the other to pieces? A. How?
 - Q. You say competition will regulate? A. Yes.
- Q. Will keep the price down to the lower notch? A. It does; do you suppose the elevated people can carry for less than five cents?
- Q. Supposing they were required to pay to the city 25 per cent. of their gross receipts, they would be bound to raise the fare? A. Yes, sir.

- Q. Then who would pay it? A. These poor gentlemen.
- Q. You say the city is morally entitled to get that 38 per cent.? A. No, I do not; there is a reasonable limit; I say competition will regulate that; the city can never regulate those things.
- Q. If you and I sit down to-day, or go back to the day Mr. Field and yourself contemplated the erection of the elevated road, with a scheme in mind that it was a good investment; you never had any doubt about it? A. Yes, we both had doubts about it; he questioned whether he could stand it until it would pay.
- Q. You had no doubts but what it would eventually pay? A. No, sir; I put my service against his money.
- Q. Did you divide profits? A. Not a dollar; I should have made a million out of the road, but my idea was to get the road and benefit my property, and I have not got the road to-day as they agreed to build it, simply by reason of reducing the fare; it is costing the city as much as the property owners; simply because they reduced the fare before they built the road.
- Q. What was your idea? A. Let them build the road and then if they could afford it let them reduce the fare
- Q. What do you think of the idea of the city owning the road? A. That is out of the question with me; I do not believe the city can own the road, because the Constitution is against it, and common sense against it, and it would be one of the politicians' machines.
- Q. We can fix the Constitution all right? A. Mark what I tell you, if the city of New York undertakes to build an underground railroad and run it, it will be the sorriest day they ever saw, and particularly with the property owners that can not get away; it will bankrupt the property owners in the annexed district; they will exhaust their credit before they get there; we know what the elevated and cable and under-ground trolley would do; another thing, let the city of New York have the running of the under-ground road and it will be nothing but a political machine, and the most corrupt we have ever known, and we have known some pretty corrupt; another thing, I went to Cyrus Field and Russell Sage and Jay Gould, I went at the request of Russell

Smith, and I asked if they would take a little stock in the underground railroad; Jay Gould said, we are not foolish; I can buy under-ground railroads cheaper than I can build them; and the others would not; such men are willing to put money into anything that will pay; any child 14 years old will admit that; still they won't touch a dollar; still these property owners must stand behind such an infamous scheme and pay for the road; if they ever build one I hope to see it in operation and see how it comes out; they will never build it; we want rapid transit facilities, and we are drying up for them.

Q. What is the matter with the Rapid Transit Commission? A. They have spent \$300,000 a year; they are drawing \$12,000 or \$14,000 a month; I attended 143 of their meetings, and I said they would not get a bid when they put it up for auction, and they did not; \$55,000,000 is a big plum for men to go after; what do they care as long as the city's credit is back of them; I know exactly what the elevated people are doing; they are sitting back in the breechin and letting these fellows jack the load; they say after they build it we will buy it after being built for \$12,000,000 or \$15,000,000; they do not worry about the underground railroad; this commission — a great many politicians are fearful this underground road will be built.

Q. You say the property owners won't let the elevated roads? A. We did not require out of 32,000 feet — I got 29,000 feet waiving rights for damages; they said they would not build another mile of road unless property owners or a majority waived their rights for damages; I got 29,000 feet and this commission was passed out in a law passed, and where are we to day; if Jay Gould had lived we would have had an elevated road two years ago to Fort George; he was worth any ten men living; he made drawings and specifications, and, at my request, went before the commission and presented them; he said, gentlemen, if it is your pleasure that we build this road we will build it; if not, we will attend to those which we have got; and I do not think the commission ever looked over the plans; it is the grandest scheme ever devised, and they have not a word to say because they

think the people's mind is poisoned against the elevated railroad; and who is suffering for it: I wish I could open the whole thing as it looks to me; 50 property owners met the other day and asked permission to extend their road and they would not do it; they said, we have paid damages enough; we paid millions in the entire system, and we have paid damages on property benefited all the way from 100 to 400 per cent; I have seven and three-quarter lots on the corner of One Hundred and Fifty-fifth street and Tenth avenue; it would double it; I would give a station 24 feet 11 inches, and if they wanted to build a chute off from their platform into my parlor they might do it; and when it was stormy I could walk right on to the elevated road; here are the Macey people, they had some sense; instead of opposing the station they begged them to put one there, and there Ahlwart and O'Neil and other parties are using them; on Second avenue they took down their station, and then the man sued them to put it back again; they are like the Connecticut witches; if they sink they are witches, and if they do not they know they are; I hope you will give us some relief if it is in your power or the power of the Legislature, on the upper part of the island.

By Mr. Nixon:

- Q. What is your idea of the extension of the elevated road? A. Within two years they should extend it to Fort George; it is now to One Hundred and Fifty-fifth street and that is One Hundred and Eighty-seventh street; that would be about two miles; the brow of the hill is about One Hundred and Ninety-fifth street; we want them to go right around Fort George, and two years extended to Kings, and within three years, extended to the city limits; it would mean \$200,000,000 advancement in the property value in five years on the west side alone; all we have is this Tenth avenue cable.
- Q. You think the creation of the Rapid Transit Commission was a mistake, do you? A. It was a miscarriage, and the worst kind; if it had occurred a little earlier or a little later it would have been better; still, all those men are all estimable men, but what is the doctor worth to hold the plow if he never held a plow?

Q. How is that these gentlemen who have been supposed to look after your legislative interests do not see to it that the board was abolished? A. Hasn't there been talking enough about it; there was a law passed that the people should vote on it a year ago; I came down with ex-Mayor Gilroy a few days ago; he is one of the brightest mayors since my day, he says, Mr. Fuller, it is the damnedest fraud I ever knew, this commission; he took the ground road would not cost less than \$100,000,000, and more likely \$125,000,000; he said, I have just come from Europe, and it is enough to see their underground roads; I have ridden on them all; look at the rumpus kicked up on the New York Central's two and one-half miles and they are elevating it now because people wouldn't ride.

By. Mr. Wade:

Q. Don't you think much of the disagreeable features of an under-ground railroad are gotten rid of by operating by electric power? A. That may be; but electric power would not change the atmosphere very much; go underground in the best dry goods stores in this city and you will see; you could not build a wall gas would not penetrate in this town; it is a gassy town; there is a great deal of filth and quick-sand; there must be necessarily; it is utterly impossible, and still they say there is no quick-sand; when I was in the sugar business we sank an artesian well on Duane street, and went down 144 feet, and spent \$20,000 and abandoned it; and still the counsel for this commission, John M. Bowers, said, there is no quick-sand; the more I think of it the more ridiculous it seems, but a piano-maker, what does he know about it; and a man who has made his money in tug boats, what does he know about that; hear the men talk; read the remarks of the president of the board, Mr. Steinway; no two members who agree with himself.

By Mr. Nixon:

Q. Who is on the commission besides Mr. Steinway and Mr. Starin? A. Mr. Low, a splendid and living picture; he is a bright

man and a scholar, but what does he know about building an underground railroad? And Alex. Orr, of Brooklyn, a splendid man, who makes me think of a horse story; a gentleman had a pair of horses, and he took a friend to look at them; and he looked them all over carefully; looked all over them, and was asked, what do you think of them? And he replied, they have got splendid tails; now, Mr. Orr, he has got splendid whiskers, and after you have said that you are done, as far as the underground railroads are concerned; and still these are all gentlemen and prominent men in the city of New York.

- Q. John H. Starin is a very good man? A. Yes; for the steamboat business; he knows how to hitch to a tug.
- Q. What do you say is your solution of the rapid transit system?

 A. Extend the elevated and trolley and cable roads.
 - Q. You can not force them to do it. A. I know it.
- Q. That commission was appointed to assist some scheme of rapid transit? A. Let them lay out an independent line of elevated railroads: I guarantee they can build one to the city limits at the outside figure for \$30,000,000; and you would see the other companies fighting for the franchise; and from the very day the thing was built it would pay the city 5 per cent. right straight along; and then people could ride in the open air and read the papers; and the under-ground would cost more than three times as much with doubtful results; the elevated cost one-third as much with profit; the vote that was given in this city was a fraud; it was put in this way: "Those in favor of rapid transit, 'aye;' those opposed, 'no;'" everyone is in favor of rapid transit; I do not know that I am abusing private confidence; I went before the Governor and put in my argument; last Saturday I went up with ex-Governor Flower and he said, Mr. Fuller, you were right; he said, I had to sign the bill because it was put before the people; but, he said, I came to New York and voted against it; and Mayor Gilroy said it was not put to the people right; they all voted for rapid transit; three men asked me three days before voting what it meant; I said, it means that this commission

intends an under-ground railroad, and they each said, I will not vote for it; nineteen-twentieths of the men voting did not know.

- Q. You think it was carried under a misunderstanding? A. Yes, sir; if this commission want to immortalize themselves —
- Q. You suggest, in order to do that, that they resign? A. Build an elevated line the whole length of this city and it would pay a big dividend; they can sell it and put it up at auction.

By Mr. Wade:

- Q. How far down do they run that elevated road? A. To Rector street.
 - Q. Has it been running to Rector street? A. Yes; I think so.
- Q. Have they got a third track through to Rector? A. No, sir; they switch in two blocks above.
 - Q. They run on Ninth avenue? A. Yes, sir.
- Q. There was a track they built it down to Fifty-eighth street; of course, when they take the main track they can not run faster than the other train. A. They take the other trains out of the way; they switch at Fourteenth and they pass at One Hundred and Tenth.
- Q. If the third track was put through from One Hundred and Eighty-seventh street to the Battery A. They could run up in twenty-five minutes.
- Q. That would not quite do; they must make some stops? A. There is a misconception about this speed; they must make some stops; it depends on the stops they make; who doesn't an expressman accommodate?
- Q. The end men. A. That is right; the hayseeders come above me; they used to call me that; if they make eight stops it takes eight minutes; then this switching from one track to another delays.
- Q. Have you heard the question whether or not the present construction is sufficiently strong to stand that traffic? A. No doubt about it.
- Q. Many are expressing doubt about it. A. I know that; engineers, when the road was built, said in fifteen years there would

not be a post standing; that granulation will set in; I think the foundations are just as strong as the day they were put in, except a few bolts and braces; I should feel ten times safer on that structure, running on an express train, than on the surface.

By Mr. Nixon:

- Q. What is the condition of the work of this commission; how far have they gone? A. No one knows but themselves, and they only know when they are in secret session.
- Q. What have they done? A. They have spent \$300,000 and that is all they have done; they will spend \$300,000 more; they have a commission appointed by the Supreme Court to see whether this road shall be built; now, the Supreme Court appoints three men to hear arguments, and they are sure to select men in favor of the road being built.
- Q. Where do they propose to build the road? A. Up Broadway and go out on the Boulevard to the city limits.
- Q. Their idea was to begin construction at once? A. Four years ago they were to commence in thirty days; Mr. Starin had a man right at the door ready to take the contract, and he has not come yet.
- Q. That commission was created in 1890, I think? A. Eighteen hundred and ninety, I think it was; it was a fall production.
- Q. No; they were midwinter or spring. A. Fifty-one years I have lived in New York, and I have not seen anything in that time to match this.
- Q. How does it come someone has not legislated them out of existence? A. I do not know why not.
- Q. This is a free delegation to this country, and you have 50 or 60 statements; why do you not elect taxpayers to office? A. You live in New York as long as I have and you will know.
 - Q. I do not. A. You will.
- Q. The work of this commission has been discussed at various times, and if it has been unsatisfactory it seems to me strange that something has not been done to render them harmless. A. It will.
 - Q. I know when this commission was appointed it was said that [Assembly, No. 98.] 76

they were men eminent in their various callings and professions, and that it was a proper kind of commission. A. They were excellent men, but for such positions you must have men with views; take a man like Seth Low, one of the most amiable men, and he will vote for anything the president, Mr. Orr, or the others say; the best man there is John Clafflin; I think he would say it was a fraud if he told the truth; 15 out of 20 men have not the courage of their convictions; let one man come up and say this is impracticable and they would go to pieces in one minute.

Q. Dissolve of their own accord? A. That is the idea; I tell you it is a terrible situation we are in, between the devil and the deep sea.

Q. You are in a deep sea. A. I don't know where I am; I get so discouraged when it is so plain; I have labored with the Third Avenue to build their road up to Tenth avenue; Mr. Lauterbach says, and everyone said, it would not pay; I said it will pay; perhaps not the first or second year; they have got the road there now; they have carried as many as 75,000 people on a Sunday.

Recess until 2 p. m.

AFTERNOON PROCEEDINGS.

Frederick K. Hinrichs, called and sworn, testified:

Mr. Hinrichs.—I think perhaps I can make a briefer statement by referring to some memoranda that I have; my memoranda on that subject.

Mr. Wade.—Go on in your own way.

Mr. Hinrichs.—And if I can present those to you as I go along, I shall make some remarks. I am a Brooklyn tax officer, and as a public officer many of these questions have been brought up before me indirectly, and such experience as I have gained as a public officer, together with such thought as I have given this subject before, and the reading of such books as Mr. Shaw's work on Municipal Government in Great Britain and on the Continent have caused me to formulate my ideas, and if the committee will permit I should like to submit some few

considerations on some phases of the question which have not sufficiently been commented upon before the committee. As a public officer and as a member of Mayor Schieren's cabinet, I have often thought that the fact that the city has property, which is largely perishable, with the exception of the real estate upon which our school-houses or our police stations are, is largely perishable, and from year to year grows less valuable. Of course, the real estate upon which that property rests becomes more valuable by the united action of the community, but we seem to be giving away to corporations that which by the united action of the community from year to year becomes more valuable, and I refer, of course, to franchises, such as we possess on the street railways, for instance, both surface and elevated. Taxation is, of course, necessary, but capable of the grossest abuse.

- 1. Introduction.
- 2. Taxation is, of course, necessary, but capable of the greatest abuse.

All schemes and processes of taxation should be carefully watched, so that the taxes may bear equitably upon all citizens, not to the discouragement or restriction of enterprise, but, as far as possible, to insure to every man the results of his labor, performed under the most favorable conditions which organized society will permit.

Taxation must be limited to the needs of government when economically administered. But if the government gives away property which it possesses, it robs the people, and if, in consequence, to support its needs, it levies taxes, in excess of what would otherwise be required, it is guilty of two-fold robbery and injustice.

3. That portion of wealth which results from the united action of the community, of right belongs to the community. If the government gives that wealth away to individuals, it unjustly prefers one class of citizens above others. And, as has been stated, if it then supplies its needs by taxation in excess of what it would otherwise require, and imposes such taxes upon all citi-

zens, its action is clearly unjust and indefensible. Such action is none the less unjust because the people do not protest, owing to ignorance of their rights. A trusted clerk who abstracts money from the till without his employer's knowledge, still unjustly appropriates his employer's property; and a guardian who gives his infant ward's property to another, despoils the ward, even though the latter does not know its rights. And the wrong to the ward is present, even though the guardian believes that he is doing nothing wrong. The wrong intent may be wrong, but the wrong act remains.

- 4. If the institutions of society, its laws, are such, that the property of the community, or the wealth which results from the united action of the community falls into the coffers of individuals, then are such institutions unjust and oppressive even though the community does not generally appreciate such injustice, or knowing it, fails to make its protest against injustice heard.
- 5. This, at least, is clear, that those, especially those in public station who have given these matters thought, should speak their mind freely, should educate their fellow citizens to a full understanding of their rights, should influence legislation to abolish evils in the existing order of things, and should not hestitate to rebuke those who, though knowing better, claim special privilege as by divine right, persist in deceiving the people, and brazenly heap terms of reproach upon those who are supporting the people's cause.
- 6. Newspapers, too, which claim to be leaders of public thought, and main supporters of the people's rights, should be the first to study the questions of the hour, and enlighten the public mind. A comic paper has no such duty. A paper which is recognized as a ring organ, or a representative of a special interest, is less open to criticism if it falls short of service of the people. But a paper which claims absolute independence, and boasts of a sincere desire to banish fraud, to expose shams and to establish the people's rights, is deserving of the strongest condemnation.

In all that I say of the press, do not for a moment infer that I am criticising the genial editor-in-chief. I have always liked

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him. He has been very industrious in his department of the paper and his occasional utterances are more "halcyon than hurtful in their permanent effect."

I shall now come to the immediate subject in hand—municipal ownership of street railways.

One of our Brooklyn papers, not long ago, on its editorial page, published an article entitled "Socialism of Municipal Ownership," referring, of course, to municipal ownership of street railways. After alluding to Alfred R. Conkling and S. Fred. Nixon as Assemblymen who had been elected as Republicans, the editorial proceeded to state that these gentlemen had developed into socialists. This, the editor concluded, as to Mr. Conkling, from the fact that he was the author of the bill which has passed the Assembly by an almost unanimous vote, providing for the submission to the people of the several cities of the State of the question of municipal ownership in such cities of street railroads. the vote stood 77 to 3, it is manifest, if the editor's logic is sound, that the entire Assembly, with three exceptions, Democrats and Republicans alike, had become socialistic. It is but fair to assume that the politicians who constitute the Assembly voted as they did with the full assurance that their respective organizations which sent them to the Legislature, approved their votes. It is also fair to conclude, therefore, that these organizations, too, are socialistic, by a large majority. And as the dictates of these organizations are usually followed by the voting citizens, including the owners and editors of the newspapers in question, it does look as if the entire community is going wild over the subject, and that Republicanism and Democracy, whatever they may mean to the learned editor, are rapidly passing into innocuous desuetude.

Mr. Nixon, the other gentleman mentioned in the editorial, was charged with socialism because he had the hardihood to introduce a resolution providing for a committee to examine into all matters pertaining to the cost of construction, expense of operation, capital stock, bonded indebtedness and the general management of the surface and elevated railroads of the various cities of the

State. This resolution was also passed by an almost unanimous vote.

We have now, I think, what this learned editor's definition of socialism is. He probably claims to be and is a Democrat. this in its essence can mean nothing else but a citizen who believes in the rule of the people, which in practice must be a rule of the majority, and which assumes, therefore, a resolute confidence on the part of such citizens that a majority of the people will generally, and always in the end, do that which will benefit themselves and thus offer the strongest safeguards to our social fabric. Now, this Democratic editor of a Democratic paper condemns in a moment of forgetfulness, I trust, as socialistic, the referring to the vote of the plain people of our cities, a measure of large interest and importance. The other unmistakable badge of socialism in his mind seems to be a design on the part of a member of the Legislature to know something about the value of street railway franchises, which franchises, in the cities of this State, have been given away to corporations for nothing, or for a price, so far as the city is concerned, so small that we are forced to the inevitable inference that some individuals, active in the city government, must have been either very stupid or very corrupt, in conferring the people's rights and property upon private corporations, in perpetuity, for little or nothing.

The editorial in question ends with the paragraph: "But municipal ownership is socialistic and we want none of it."

Now, it has been suspected that some of the owners of the newspaper in question are largely interested in one of our principal street railway systems. If this suspicion is well founded, it is perhaps natural for the paper to regard any iniquity into the value of the franchises of such railway as being likely to lead to an entire cessation of the awarding of like exclusive privileges, and possibly to a termination to, or limitation of, those already granted. But such inquiry, and the eliciting of popular opinion as to public measures, are not socialism. If they are, then has Switzerland been infected with socialism for years — and the staid and conservative rulers of Great Britain's municipal-

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ities, from the time of the building of the first tramways to the present day, have been literally rioting in socialism.

Gentlemen, do not be frightened by epithets. The words socialism and communism are used as blankets to smother many a generous impulse, and worthy effort to bring about reform. same paper which has found so much of socialism in the proposition to have the city preserve its ownership in iron railways, as it does in is granites or asphalt paved streets, advocated the buying by the city of the Wallabout lands for market purposes, and approved right heartily chapter 101 of the laws of the last Legislature authorizing the issuing of bonds to the amount of \$50,000 for the purpose of sewering, and strongly advocated the building by the city of another monster bridge, and otherwise improving the Wallabout market property. Now, if it is right to provide a market, it is equally right, logically, though perhaps not practicable, for the city to provide drug stores and paint shops and dry goods stores. It is true the markets are often and usually provided by cities, both in the United States and in Europe, but upon what principle do we limit the city's providing markets. or, indeed, upon what principle do we justify the providing of the market itself? Of this I am reasonably assured that if the Wallabout were a private corporation, and the newspaper in question owned stock in it, an attempted investigation of the value of such market and an avowed purpose to acquire it for city control, would be denounced as socialism. Now, does the fact that a city proprietorship of a market in common make it the less socialistic? Or the fact that the city is not seeking to limit, control or purchase the rights of a private corporation in a market, render the providing of the market any the less socialistic?

The Brooklyn bridge began as a private enterprise. To complete it its originators, who were conservative, old-time, hardshell politicians, and some of whom were closely identified with the paper in question, advocated city ownership. And after a great deal of scandal, incident to one of the principal private stockholders being the chief contractor, city ownership followed, with no great financial loss, I take it, to such worthy gentlemen. And

such ownership has continued to the present day. And yet Messrs. Kingsley, Murphy, Stranahan and their associates were classed neither with socialists not communists, but have always been held up to the admiration of their fellows as "first citizens," far-sighted, public-spirited and the like.

The minutes of our common council in May, 1873, give the interesting story of how badly the bridge was run in its first stages under private management, making the present public management appear by contrast like a garment bleached by a fuller.

A project was in the air for some years to build a bridge from the Eastern District to New York, but for one reason or another it failed to materialize. Perhaps it was never intended to materialize. Possibly the franchises were obtained with the object of some day selling them to the cities of New York and Brooklyn for a price containing a snug profit for the public-spirited projectors of the bridge scheme. Be this as it may, even our worthy, conservative mayor, whom I highly honor, and who is very careful to condemn anything which to him bears the slightest semblance of dreaded socialism, became anxious to have and succeeded in having the city assume the burden of the Eastern District bridge enterprise, and this, too, in the face of the often just criticism which he has made of the management by public authorities of the magnificent structure now spanning the river. Our chief magistrate condemned as socialistic a proposition of the aldermen to provide for the ultimate acquiring by the city of a franchise recently awarded, although he probably sees no danger in the purchase of the New Utrecht or Flatbush water plants. It is difficult to see in principle, if one exists, between the purchase of a water plant and an electric-light plant, or the franchise of either.

The net bridge terminus offers an admirable object-lesson of the confusion of ideas and illogical methods of many commentators upon this matter of municipal proprietorship.

The tracks of the bridge terminate where those of the private elevated road begin; and if you cast your eye along the tracks toward the bridge you see before you for a certain distance an No. 98.] 1209

elevated road, and if you look in the other direction toward the city, you see extending into the heart of the city a series of bridges. Now, by what subtle alchemy does the running of the elevated road called "bridge" by the two cities become right, while the running of the series of bridges called "elevated road" become wrong or socialistic?

Socialism is a much abused word. According to the definition in my edition of Webster, socialism is "a theory of society which advocates a more precise, orderly and harmonious arrangement of the social relations of mankind than that which has hitherto prevailed." Now, there is nothing very alarming about that. This definition, though vague, almost meaningless, is as harmless as a party platform, or indeed as the utterances of many public men upon the currency and the tariff reform. These reforms, to them, are the "more precise, orderly and harmonious arrangement" of the currency, or of the tariff. No one can oppose such reforms, I am sure.

But good old Webster makes one mistake when he confounds "communism" with socialism, as he does. They are as distinct as communism and the single tax, or the land doctrine of Henry George.

Webster defines communism as "the reorganizing of society, or the doctrine that it should be reorganized by regulating property, industry and the sources of livelihood, and also the domestic relations and social morals of mankind, especially the doctrine of a community of property or the negation of industrial rights in property."

Now, I concede that it is by no means an easy matter to define these terms, yet, nevertheless, they are distinguishable by definition, although communism trenches upon socialism as socialism does upon the single tax views, and even co-operation is related to both socialism and communism. But, for that matter, "communism" and "socialism," as the terms are mistakenly used, and as I have shown, are right in our midst to-day, and sustained and advocated by musty, hoary-headed, conservative members of so-

ciety. And the dear old gentleman don't know that they are standing as guardians to wards of so dangerous character to existing institutions, as they believe anything socialistic or communistic must be.

Now, socialism holds a middle place between communism and simple co-operation. Unlike communism, it does not advocate the absolute abolition of individual property, but aims simply at a more just and equitable distribution and use of it. The great aim of socialism is to carry out St. Simon's maxim, "Every man according to his capacity, and every capacity according to its work." It does not, however, confine itself, like co-operation, to a mere regulation of the relations between capital and labor, restricting or even excluding competition, transferring the profit from capital to labor, but attempts a complete reconstruction of society. With the ideas of co-operation for a basis, it approaches communism partly by extending the compass of those ideas of co-operation, but chiefly by employing them as means to a moral end.

Communism is a religious tenet, co-operation an economical scheme, socialism a moral as well as economic reform.

The only absolutely pure example of socialism which we have is found in our public schools. The most influential socialists in spirit, although they do not accomplish what they set out to do are those who seek by the protection policy to impress the condition of the laborer.

Now, in advocating municipal ownership of street railways, we are not disturbing any existing property rights; on the contrary, we are striving to prevent the dissipation of such property rights and the transferring of the property which the citizens already own in common to private corporations. We are striving for more, for we wish to prevent the appropriation by such corporations of the valuable money results of the united labors of such citizens as have already parted with their property rights. In other words we intend to deprive such corporation of the "unearned increment," and to give it to the people to whom it belongs by reason of their having earned it. That is the plain English

of the situation. It is not communism, but simply fair play, and, thank God, the people are beginning to understand it.

WHERE TO EXPERIMENT WITH MUNICIPAL OWNERSHIP.

Judge Van Wyck, of the city court, has granted an injunction restraining the city from further interference with the construction of the Nassau Electric Railroad in Marcy avenue. He holds that, as the railroad company has complied with the provisions of the law, it should be allowed to complete the road and to operate its cars. If satisfactory proof was presented that all the conditions had been met the decision of the judge was the only one that could be rendered.

The necessity for the road which this company is building is undisputed. The only question on which there was disagreement was the route which it should take to reach the Broadway ferries. This has now been settled and a new district will be opened to householders. It is in the suburbs that the process of city building can be studied from their beginning. One of the most important forces for the attraction of population is a railroad. is valueless for residence purposes unless it is possible to get from it to the business centers with ease and some degree of speed. The Nassau railroad will furnish to new territory the railroad facilities which have long been desired. It is within the territory that this road will tap that the experiment of municipal ownership of railroads should be tried, if it is to be tried at all. purchase of the plants of the old railroad companies is not to be considered. They represent an expenditure of money which is far in excess of the amount which the city could afford to pay for them. The advocates of municipal ownership should not waste time talking of the purchase of the Brooklyn City road or of the roads owned by the company that operates the DeKalb Avenue line. The Nassau Company owns a road which represents the expenditure of a reasonable sum of money, and it runs through territory which is still unoccupied. The test of municipal ownership should be made in such territory if at all.

By municipal ownership is not meant the operation of the rail-

road. Glasgow represents the kind of socialism which the term includes. For a little more than twenty-two years the street railroads of that city have been owned by the corporation and leased to operating companies. The city receives as rent 4 per cent. on the cost of the tracks and plant and equipment, in addition to 4 per cent. for the renewal of the rolling stock and preservation of the value of the plant, besides \$750 a mile each year for repairs to These terms were made in a contract that was to run for twenty-two years. The contract expired last year, and it has not been renewed by the city, because the authorities thought that it would be more profitable to manage the road themselves. city had received during the continuance of the lease the interest on the money invested, together with all that the plant cost it, and at the end of the period had practically a new road and a large sum of money in the treasury. The experiment of municipal ownership was successful. It remains to be seen whether the experiment of municipal operation will justify the claims of its advocates.

There is a large undeveloped territory within the city limits which needs railroads. If the socialistic experiment is to be made in Brooklyn its advocates should abandon their agitation in favor of the purchase of the old and expensive companies and turn their attention to the southern part of the city. If Nixon's railroad investigating committee really cares more for municipal ownership than for attacking existing railroad corporations it should devote its time to the exploitation of the possibilities of suburban development through the patronage of the municipal authorities.

MR. GROAT IN THE "EAGLE" OF APRIL 18, 1895.

I am not a socialist, yet I can not refrain from calling your attention to one fact which ought never to be forgotten when we deal with street railroads of Brooklyn—the most valuable grants which these corporations have received from the people, and for which they have paid nothing. It is easy to reckon the fair value of these franchises by comparing the book and market values of

the railroad stock. I quote from the last published railroad report, that of January 31, 1893, adding the market value of that date:

	Capital.	Book value.	Mar- ket value.	Excess of market over book value or values of franchises.
Coney Island & Brooklyn	\$1,000,000	107.9	183	\$751,000
Brooklyn City	[9,000,00]	107.9	198	8,100,000
Brooklyn City & Newtown	1,000,000	107	150	430,000
Broadway	525,000	122	140	95,000
Atlantic Avenue	1,195,000	114	270	657,000
Total				\$10,033,750

The market value of the first two roads are actual quotations. The next two, for which no quotations were found, are estimated by a comparison of their assets, and dividends with those of the The Atlantic Avenue is reckoned by its sale price on the formation of the Brooklyn Traction Company. nominated the sums by which the market value exceeds the book value on the value of the franchise. Let us see if it be not so. The book value shows the actual cost of building and equipping the road, the cost of every car, horse, motor, rail, stick, nail or foot of land. It sums up the entire tangible, physical property But people are willing to pay in open market a of the road. larger rate per share for the stock than this cost of construction or than the dividends paid will warrant. There must be something else of value, then, which the railroad owns, and it can be nothing else but the right to operate and run in the streets of the city, the right which the people have given them for nothing. This value for these five Brooklyn roads is not less than \$10,000,-This is a low figure. It is a sum upon which they pay no taxes, for their taxes run upon their other assets only, except the small car license. Having, then, this enormous franchise value of \$10,000,000 gratuitously given, they are in no position to ask further favors of the people. It would be but a trifling-

I am not advocating anything untried. We have had examples of successful municipal street railway, owning, as we have, successful municipal markets, owning successful water, gas and electric light plants, under city control, and successful public management of wharf, bridge and pier property. Now, if these differ essentially from the maintenance of a police force or fire department, the control of sewers, the opening of streets, laying and maintaining of pavements. In larger areas we have had successful post-office management, and we shall have, I believe, the telegraphs, telephones, and railroads, as in the case to-day in certain of the nations of Europe. Surely no national government of a railroad can equal in extravagance, fraud or neglect of ordinary business engagements, the private or quasi private management of the Pacific railroads, nor has any city scandal so greatly shocked the sense of fitness, fairness or propriety as did the private operations of the Long Island Traction Company in its vain attempts to make a great deal out of little.

The feasibility of street ownership has been demonstrated by the experience of English cities.

I am one of those Americans who do not believe that everything American is the best. I am very proud of my country, and am thoroughly convinced that in many respects we enjoy greater privileges than citizens of other civilized communities. is here a larger measure of personal liberties than in European countries. We may not only think as we please, but freedom of speech, of writing, and of action is permitted and encouraged, as long as we do not violate decency or slander or libel our neighbor. And this is especially true as to our criticism of public affairs and of public men. So highly do we appreciate this blessing that we are all willing to endure many inconveniences, hardships and evils so long as our right openly to condemn them, and by united action, to remove them, is accorded to us. But no American can shut his eyes to the fact that in many matters Europe is in advance of us, and that the experience of the older nations can teach this comparatively young Republic many lessons of state craft, of political wisdom, of governmental administration of the

affairs of cities. Foreigners have very justly ridiculed us because of the inordinate conceit and self-sufficiency which we have too often shown. It is right to have an exalted opinion of one's country, its institutions and its citizens. This is patriotic, but our patriotism must neither blind us to our defects nor obscure the excellencies of older civilizations. I believe that we are daily receiving evidence of a new spirit among Americans. They are growing less confident of the excellency of the Chinese policy of extending good ideas because they are foreign, more humble and do not know everything We more teachable. Indeed, in many matters we know very little what the race has been accumulating for ages, and the results of which are mainly stored up in the libraries, in the scientific and art collections of Europe, and in laws and public customs which contain the results of many centuries. The teachable spirit which our people is showing is pleasantly revealed in the many instances of visits which public men pay to European cities to learn of them how to solve many of the problems which our own municipalities are presenting to us. If the same teachable spirits were shown by our governors in the field of national politics, I take it that many of the economical fallacies which our laws embody would not continue long. Perhaps the conflict between Japan and China may bring about an era of greatest humility in National matters. The spectacle of doughty Japan, with its smaller numbers, equipped, however, with the learning of the white nations of Europe, overcoming the armies of ancient China, with its unnumbered population, but with its Chinese wall exclusiveness, should teach those who have found America all sufficient for herself, that they may be mistaken. May it not be that in insisting upon doing all for herself, she is really robbing herself of the opportunities which the world is holding out to her if she will but grasp them; that in the effort to build her own ships she is doing her mercantile marine, the carrying trade of the world and the school for her navies when she needs them most; that in insisting upon building up, at any cost, certain mine and factory interests she is making the few rich at the expense of the many; reducing her commerce, burdening her farmers, and throttling other manufactories than these less favored, and thus everywhere injury and injustice; that in refusing to learn of Europe the methods of sound finance she is breeding pain at home and distrust abroad. To-night we refer alone to one problem presented to Americans who dwell in cities, and now pressing for solution. European communities appear to have solved it in a way entirely satisfactory. As to this we can learn much by examining the facts which a study of foreign, and especially British cities, present to us. I must say right here that our ancient Revolutionary foe, England, is not as bad as she is usually painted by our average Congressman. I verily believe that blood is stronger than water, and that England is essentially our mother country; language, literature, laws and customs have come to us more from her than from any other of the older nations. lieve, therefore, that way down in the very heart of the very man who is perpetually reminding his hearers of his deep-seated hatred of everything British, has a respect and admiration for England which, if he spoke his real mind, he would be bound to express. I feel a love for sturdy, wise and mighty England. There she stands, the mistress of the seas, the holder of the purse-strings of all nations, the freest nation, in some respects, in the wide world; the mother of great statesmen, and the preacher and teacher of the wisest economics. The Americans who are afraid to accord praise to England, except by aping her in her fashions, pause for a moment before you pretend to show your fierce hatred of her politics and examine with me what she has accomplished as to her municipal means of transportations.

This question may be treated as an economic question solely. I have so treated it. But we may be compelled to go a step further even than most English cities have gone.

Now, in the struggle which is going on in our great cities of popllation between employer and employed, are but an evidence of new conditions in society offering new problems, and they must be, and, of course, will be, solved in this age, as other social problems have been solved in others. There will be friction, and arbi-

trary demands and stubborn resistance, but change of some kind will come. Compulsory arbitration is probably near at hand. I do not agree with those who say that the decree of arbitration could not be enforced. If they act fairly, with an exalted sense of this office, public opinion will sustain their decrees, and public opinion can accomplish anything. Without it no law is enforceable; with it a child can lead a host whither soever it will. In case of arbitration in the last strike, after a fair hearing, think you that either corporations or employes could have resisted the public opinion which would at once have formed about the judgment of the arbitration board?

But if this will not do, then all instrumentalities of life which are, in their nature, monopolies, and in which the public are as much concerned as either employer or employe possibly can be, will have to be controlled by the people. We have no strikes in the Government service. The post-office has never ceased its operations, the bridge cars run from year to year. Ah, but you say, wages are higher in the Government employ than in private callings. This is generally true, but despite that fact, the people gain. All that there is of profit above the payment of wages is the people's, and, of right, ought to be.

JUDGE BROWN ON MUNICIPAL OWNERSHIP.

The address of Judge Henry B. Brown, of the United States Supreme Court, to the graduating class of Yale University, furnishes evidence of the great advance that the question of the ownership and operation of railroads by the municipality, and even by the State and nation, has made in this country in recent years. Judge Brown has reached the ripe age of 59, and has served many years on the bench, five of them in the Supreme Court, and has had frequent occasions to consider the question concerning which he spoke to the Yale students; so that his utterances may be accepted as the conclusions of a man which is both studious and practical.

In referring to what he termed natural monopolies, he said: "Indeed, whatever the proposed business is of public or semi-

public character, and requires special privileges of the State or a partial delegation of governmental powers, such, for instance, as the condemnation of land, or a special use of disturbance of the public streets for the laying of rails, pipes or wires, there would seem to be no sound reason why such franchises which are for the supposed benefit of the public, should not be exercised directly by the public. Such, at least, is the tendency in modern legislation in nearly every highly civilized State but our own, where great corporate interests, by parading the dangers of paternalism and socialism, have succeeded in securing franchises, which properly belong to the public."

These words will be read with great interest as a condensed argument in favor of public ownership of all natural monopolies, and the people of this city who have won through such a bitter experience with private ownership of the surface roads will probably consider Judge Brown as a great accession to the ranks of those who have come to the conclusion that the only way to secure the public accommodation, which is the one purpose of the franchises granted to such natural monopolies, is in municipal ownership and operation of the same. And it will be observed that Judge Brown was careful to disclaim any necessary connection between this proposition and socialism. For, before making the statement quoted, he distinctly stated that national socialism has never been found except among primitive types of people and that the whole fabric of civilization is built upon the sanctity of private property. His whole point is that the public should control what are distinctly public affairs.—Citizen.

One day when thinking about this matter, a fire alarm sounded and the splendid engines passed. Would the people allow their fire protections to be put into the hands of corporations?

How about the bridge?

How about our water supply?

Our street construction — our streets themselves? What is their difference in essence between a stone or asphalt street or way, and an iron or railway? But who would give up our schools? Nothing more sacred than our children, but we commit them to the public for their education.

Judge Cullen's point against ownership of railways.

But fie! These men would not turn their guns upon their country's flag. Trust in the people, in the plain people. The great reformers were poor. The Galileo prophet would be turned out of our churches and cars and be confined as a lunatic or a communist. I think I have stated enough to show my views; I am willing to answer any questions.

- Q. I would like to ask you a few questions; what wages does the City of Brooklyn pay the common laborers? A. I do not know.
- Q. Street laborers? A. I do not know, but I can easily ascertain; I think they pay a little more than private enterprise.
- Q. Does the city of Brooklyn pay as much for street work as is paid by the street surface railways? A. I do not know.
- Q. Then your idea that they would pay larger wages if the city operated the road is not based on present actual physical conditions? A. Yes, sir, it is; I know the stock and bonds are largely watered.
- Q. They are not paying interest on them? A. No, but they are paying interest on bonds very much in excess of the value of the roads.
- Q. Take the elevated road from the Brooklyn bridge to the City Hall; what did that cost a mile? A. I do not know except from hearsay; I know what they want to pay in the way of taxes.
- Q. That is no criterion; they do not assess property for 100 cents on a dollar? A. No; we pretend to assess on 70 cents.
- Q. We pretend to all over the State, but we do not. A. As a matter of fact, we assess 100 cents on a dollar.
 - Q. That is a mistake? A. No; on account of the appraising.
- Q. You do not intend to do that? A. The theory of the government is to assess 70 per cent. on improved property.
- Q. The theory of the law is to assess 100 per cent., and the theory of the assessor is to keep the town down and the board of

supervisors to keep the county down? A. We have to assess very high in Brooklyn.

- Q. You have had an ambition to keep the tax rate down more than the assessed valuation? A. We have had the ambition in Brooklyn to, but have not succeeded very well.
- Q. You spoke in the commencement about the city owning the grocery store and the dry goods store, and the various other enterprises that you referred to, all of which was possible for the city to successfully operate? A. I did not say it was possible; I said it was as logical although not practicable, as to own a market.
- Q. You spoke about the newspapers that criticised this committee as being socialistic in its tendency; which paper was it A. The Brooklyn Eagle.
- Q. There is a paper advocating municipal ownership is there not? A. I think that is the Brooklyn Citizen.
- Q. Do you remember reading in that paper the evidence of a gentleman who appeared before this committee advocating municipal ownership? A. I very seldom read the paper; it is not a paper of very large circulation.
- Q. And that I, in examining, suggested practically what you have, that logically it was as correct to run a store or meat market; I wanted to know if you saw the editorial of the Brooklyn Citizen on me when propounding that inquiry? A. I do not know; it is largely like all other papers, largely irresponsible, I suppose.
- Q. They condemn your notion and mine most horribly; would you advocate the building of a railroad in the city of Brooklyn upon the same basis that was constructed in Brooklyn? A. Yes; that is, the roadbed?
 - Q. Yes? A. I am very clear as to that.
- Q. Is there any difference between the roadbed and the equipment, in principle? A. I do not think there is much; I simply hesitated because more experienced men told me you are going a little too far; my own judgment is I would have the city own and run the road.
- Q. For the purposes of this examination I will take the other side; I want to know if you would be willing the city of Brooklyn

should go to work to-day and construct a railroad system in the city of Brooklyn; assume if you please, when they started, there is no system there, and the city construct it there and operate it as the city of Glasgow did? A. Assuredly; that was twenty-two years ago in Glasgow.

- Q. Do you know about how that road in Glasgow is patronized? A. The Glasgow road was built—
 - Q. Patronized, I mean? A. I have never been told.
- Q. If I understood Mr. Shaw, correctly, that is patronized by a greater proportion of the laboring people than any other road in his acquaintance? A. I know they reduced the fare as part of the initial attempt.
- Q. I should think they would they built the road and put it into the hands of a private company to operate; they forced that company to pay annually into the sinking funds an amount which would pay for the whole road in twenty years; to pay semi-annual interest, to pay annually into the repair fund 4 per cent., I think; to pay into the street fund a sufficient sum to keep that portion of the street and pay all their taxes, and pay a rental of \$750 a mile, and then the company, in addition to that, made a handsome dividend? A. Furthermore, the company, the first company that purchased, sold the next day for \$750,000, I believe.
- Q. That makes it worse; the laboring people of Glasgow paid that money, and the city with its wealth and wealthy people who rarely patronized the road, received that road at the expiration of twenty years, absolutely gratuitous from the poor people that patronized it? A. Yes, but did not the poor people own it?
- Q. Here is a man without any real estate in the world; he is in a rented house; the land of which it is fixed when they take into consideration the subject of taxation and interest and the revenues turned into the city treasury? A. He is very much worse off if he goes to the private company.
- Q. But you want that system in preference to having either the city or municipality control it and reducing the fares for his benefit? A. I think you misunderstand me; if you are of the opinion that the municipality should also own and operate the road, I am

heartily with you, but in all these matters I have respect for other people's views.

- Q. I do not want you to understand me that way; I am not going to tell you my personal views now; if you were advocating the other side I might take the opposite side in the examination? A. I am prepared to have one road to-day run by the city, run in every part by the city.
- Q. You have, of course, read Ballamy's "Looking Backwards?" A. Yes, sir.
- Q. That embodies municipal ownership of street railroads and government ownership and everything else? A. The book is rather fanciful.
- Q. Carried out to a logical conclusion it takes away the ambition of every person except a mere official position? A. It does not seem so to me.
- Q. What is there left for a man to do? A. Do you mean with society at large?
- Q. I mean if Bellamy has got his whole thing worked out? A. I do not know; we shall not realize it during our lives.
- Q. I hope not during the time I live; your business is practicing law? A. Yes, sir.
- Q. You obtain a franchise from the public in your business, do you not? Λ . Do I personally obtain a franchise?
- Q. Yes? A. Yes; I do; I am protected by certain laws which say I can not practice until I pass an examination, and nobody else can until they do.
- Q. I did not mean that feature; here the people of Brooklyn are assessed to build a court house in which you practice? A. Yes, sir.
- Q. And it furnishes a public library you use free? A. Upon the payment of a small compensation; the judges' use it for nothing.
- Q. That is in the nature of a franchise; it is giving you the privilegea harness-maker does not have; it is a feature of socialism; you would not abolish that, would you; would you have the courthouse owned by a private corporation? A. No; I would not.

- Q. Here is a large firm running a large wholesale business in your city; its trucks and teams are traveling over your streets of your city drawing its goods? A. Yes.
- Q. They are covering their sidewalks by the store? A. They would not cover the sidewalks if I was police commissioner.
- Q. You would not attempt to interrupt decent, legitimate business of your city? A. No; for a reasonable time.
- Q. You can not fly into the third-story window with boxes of dry goods on your back; there must be some means of crossing the sidewalk; those things should go on a reasonable basis? A. Yes, sir.
- Q. There is that concern costing you money, a large amount of money every day, in the street cleaning department? A. Yes, sir.
- Q. No one thinks of taxing it for it; it is simply paying the same rate of taxation that a widow woman pays on a house to live in? A. That is largely true.
- Q. Don't you think the city of Brooklyn, with all your railroads, if they were in the hands of a corporation that was capitalized dollar for dollar, with some sort of control over the fare that is charged so that it would be reduced as low as it could possibly be reduced, paying the labor for its corporation fair wages and the capital interested a fair income, would be the most beneficial change that could happen to the city of Brooklyn in regard to its street railroads? A. It would be an improvement on the condition now existing; we must take into consideration human nature; it has a tendency to inflate their capital; railroad men have often told me the profit lies in the franchise.
- Q. That is true to a certain extent, but it is quite possible that the franchise has been largely increased in value since the company acquired it by the construction of the road and the increase of value in the adjacent property? A. That is part of the whole community.
- Q. The public is not entitled to that; you have spoken about the Brooklyn bridge as the ideal with municipal control? A. I do not think it is the ideal; I think it is pretty good; much better than the Pacific railroads.

- Q. You know there is a great deal of complaint in Brooklyn and New York about affording inadequate facilities? A. Yes, sir.
- Q. There is not a place in New York or Brooklyn where they crowd the cars as they do there? A. No, sir; engineers think that the bridge has reached its limit.
- Q. They run ten street cars in the same space they do one on the bridge in some places? A. They have reached the limit on Fulton street.
- Q. Your city ordinances have reduced the rate of speed and the people stand up and damn them because they do not run faster and more cars? A. That is illogical and unfair.
- Q. Have you ever examined the sale of these franchises to satisfy your mind of the best method of disposing of them, assuming they are to be disposed of? A. We used to have an ordinance in the city of Brooklyn under which they were put up for sale; it was the Cantor Act, if I remember rightly.
- Q. Do you think that the act was good? A. I think it was pretty good.
- Q. You have seen its operation here in New York? A. Oh, yes; either the question of human nature comes in, and corrupt politics.
- Q. Would you ever advocate actual ownership of street railways and the like while the municipal government is controlled by politics? A. Yes; I think I would; I do not think anyone would put the fire department in the hands of a private corporation, or the public schools; I do not know what your views are; you know, if you put responsibility on the people the people will keep alive to their interests.
- Q. You have right here in the city of New York the responsibility of expending \$50,000,000 a year of the people's money? A. Do you mean the rapid transit scheme?
- Q. No; I mean the municipal government? A. Has been badly and corruptly done.
- Q. Who has been to blame? A. In the first instance, corrupt politics, and second instance, the intelligent citizens and ignorant citizens.

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- Q. Do you believe it is in the citizens of New York? A. I think men are honest, but a great many are ignorant.
- Q. It is simply because of the inactivity of business men? A. A lack of interest in public matters has a great deal to do with it.
- Q. That is what I mean; it is utter indifference? A. That is in regard to conventions and elections, but when you come to fire systems and police systems, you will find public sentiment is so strong, even the most corrupt must run these things well.
- Q. I have not seen any favorable comment on the public school system of the city of New York; have you? A. I am more familiar with the city of Brooklyn.
- Q. This subject has been published for years? A. I think the school system in New York has been free from scandal; I know our Brooklyn schools are.
- Q. Would you compare the conduct of a public school to the construction and operation of a street railroad, and say the same principle was involved in it? A. I think it ought to be as easy to conduct a street railway property as a public school; they are entirely different; one is entirely mechanical and the other educational.
- Q. Do you think the same principle is involved in the operation of a public school as a street railway? A. There is the same principle involved in this way; that the machinery for running the public schools would be furnished by the municipality; there is a harmony between the two systems in regard to the employment of labór.
- Q. You think levying a duty upon a foreign import is the government taking part in enterprise? A. I do.
- Q. Purchasing goods of that kind? A. I do unless the duty is imposed for the purpose of raising revenue only; I am personally a free trader; I should personally prefer the duty raised in any other way.
- Q. You regard the feature of levying those duties for the purpose of revenue and also for the purpose of protection as a feature of socialism? A. I think as far as it is for the purpose of protection it is wrong and indefended

sible, and I think it is unquestionably inclined towards socialism; I think it is generally advocated on the ground that it is good for the community, that people should be wiling to pay more to build up an industry; I have met all the prominent advocates of that system from Kelley, of Pennsylvania, down.

Q. You have advocated what? A. I have advocated free trade; I regret to say I have very few associates.

G. W. Thompson, called and sworn, testified:

By Mr. Wade:

There is one point I would like to make before I read what I have here in regard to railroads, and it is a very important point; and that is, that was brought up by the questions which have been asked; I would like to say a few words on it; it was asked if a person using a truck, making use of the road, is not enjoying a franchise; it depends on how you use the word franchise, because a man is not enjoying in any sense a special privilege; there is competition amongst those using trucks; if it costs more to deliver goods in some cases there is increase in the price of the goods; secondly, there is no franchise in the case of a person traveling the streets with wagons; in the case of a railroad it is different; there can be no competition between railroads; they are using public property and they have the power to demand arbitrarily whatever they choose within certain limits of forbearance and good will of the community; they have power to demand what they choose and give such service as they choose to the community; that is the important point to bear in mind, because it is the distinguishing point and prevents our going into socialism; socialism tends to do away with competition and step into the fields where present competition exists; railroads make use of public property and the courts have decided that railroads are public servants, their control by legislation is not socialism; socialism as a principle believes competition is a bad thing; on the question of those who believe in the running of railroads believe that if there could be competition between railroads and for those roads to survive and live, then there would be no necessity for the government to interfere or step in; I desire to make that point as I think the other gentlemen who are here will agree with me on that point, and I do not think they will quite agree with what Mr. Hindrichs said on the subject; that there is a very sharp and marked dividing line as to how far legislation should go in the taking up of public corporations—

- Q. Right there; of course the question that was put to Mr. Hindrichs about the use of streets and trucks, the term franchise was not used, but it was used in connection with his business; now, he has got an absolute franchise while in his court room? A. I deny that: there is competition.
- Q. I say, while he is trying his case? A. To determine that question we simply ask, is this a benefit to him or a benefit to the community; now, if he passes on the benefit he received to the community then it is not a special benefit which he enjoys, and the fact is he passes on the special benefit which he received; it is not confined to any few lawyers.
- Q. It is confined to that profession? A. It is confined to the profession, but there is not anything to prevent anyone going into the profession.
- Q. The benefits they receive are passed on to the community; the same way in regard to those of the streets; there is competition in Brooklyn in the railroads? A. There is competition; but you can not have competition without suicide; if two companies compete one will go to the wall.
 - Q. Why? A. Simply because they can not succeed.
 - Q. Cut the rates too low? A. Yes.
- Q. But the public gets the benefit? A. Yes, but it results in the death of one road; and then there will be but one road in the field; in regard to municipal roads there is no cutting of rates; in Brooklyn there is not a competition to a large extent because the largest part of the roads have been swallowed by one road.
- Q. Don't you know the elevated roads are complaining bitterly because the trolley roads are cutting into their business? A. It might be.
 - Q. Their receipts show it? A. During the strike they in-

creased; the elevated roads are carrying more passengers than before the trolley started in; the reason the roads have not swallowed it to the full extent they will ultimately do is because we have not had sufficient traveling facilities in the city of Brooklyn; if we had there would be more competition between the roads; all the cars are crowded during the business hours.

- Q. You know some of the roads have hardly paid operating expenses? A. That is because watering of stocks exists.
- Q. No, that does not interfere with the operating expenses? A. I can not understand the fact; it is simply a statement from them and I do not think anyone who lives in the city of Brooklyn can understand that; I cannot controvert simply because the people can not get those facts; the reason they have not paid operating expenses is because of the strike.
- Q. They have to make sworn reports; if you assume sworn reports are an issue of falsehoods— A. I have not any hesitancy in saying that sworn reports that show the roads of the city of Brooklyn are not paying operating expenses—
- Q. Do not say that; I say some of them? A. Any of them, I should say, because here is a new road starting out, an entirely new enterprise that goes through a district not populated previous, and it is paying operating expenses; there is no road in the city of Brooklyn situated as that road is.
- Q. You would not think there would be any difficulty in their knowing whether they did make their operating expenses or not? A. There should be no difficulty; operating expenses may include big salaries and other things.
- Q. It would necessarily include what they did actually pay; I did not mean to interrupt you. A. I perhaps misunderstood the object of the committee, and if I have I ask pardon for misstating it in one or two words.

To the Legislative Committee on Railroads of the State of New York:

Gentlemen.— With your kind permission, I desire to lay before you the result of my study on the question you are now investigating, which, as I understand it, is more particularly: What law

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should be enacted to bring about the proper relations between the railroads and the communities in which they operate? Thus would we leave out of consideration the greater question of treating with roads operating between communities and various parts of the State. We believe that this division of the subject is necessary as these two classes of railroads would require separate laws which, although enacted at Albany, would, of necessity, operate through different channels. If we define these two classes of railroads as State roads and municipal or county roads, we see that the State Legislature should properly pass laws directly affecting the State railroads, but that such laws as it passes affecting municipal or county roads should only affect such roads through the municipal or county officials. This distinction should be clearly borne in mind; otherwise the inefficiency of any law passed will be an inevitable result. Our present railroad and arbitration commissioners are State officers, and as such, are absolutely of no use when disputes arise affecting municipal or county roads.

If we are to have commissioners who arbitrate differences between municipal and county roads and their employes they should be municipal or county commissioners. Possibly such duty should devolve upon appointees of the mayor or supervisor at large or similar official with ample powers.

We will now direct our attention to municipal and county roads, and it is asked what are the evils complained of.

They are as follows:

First. The use of public property without any system of compensation based on the value of the property used. I say system of compensation because the railroads are supposed to give compensation in providing the public with accommodation for travel, but this is no system for it leaves the community at the mercy and will of the railroad companies. The municipal railroads, if they are to continue to exist, unowned by the community, should pay to the community the value of the franchises they hold. The value of the franchises may be determined in two ways; first, by public bidding, and second, by the profits of the company. We have no hesitancy in formulating the following proposition,

namely: that the annual value of a railroad franchise is that amount which would be left after paying the running expenses of the road, allowing for depreciation in the value of the plant and paying a fair interest, say 8 per cent. cumulative on the actual capital invested in the plant. It makes little difference to the community whether it receives compensation in the form of a sum paid its treasury or in low fares or in good service. It is enough that such compensation is paid. Laws should be enacted to provide for the payment of this compensation and these laws should absolutely prevent the watering of railroad stock, and the municipal control of the railroad should be such that their entire original cost, and their expense accounts in detail, should be open to public scrutiny and subject to the approval of the municipal authorities. In publicity alone is safety.

The second evil we have to notice is, that railroads are laid out and planned by private individuals very and most frequently without regard to the public requirements. Competition between railroads is always suicidal, and municipal roads, where competition exists, should be as much as possible under one management. A system of universal transfers should exist. In the city of Brooklyn the most demoralized condition prevails. We have two "L" roads in competition that should belong to one system and which should give transfers at crossing points. We have also several surface companies operating numerous lines, in some cases competing, in some cases giving transfers. All these lines should be compelled to give transfers at crossing points. Furthermore, no franchise should be given unless it is for a line included in some comprehensive system which it should be the duty of the municipal authorities to lay out. The granting of a franchise now is only done when a company asks for it. Rightly, the proper municipal authorities should determine what new lines are wanted and offer them for competition to the highest bidder.

The third evil we should notice is that franchises are given in perpetuity. This is wrong, but principally because the people do not realize that such gifts of franchises can be revoked at any time by the same power which gave them. Municipal railroad

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franchises should not be given for a period of more than ten years.

The fourth evil is that of overcrowding. Careful figures should be obtained as to the average number of passengers carried per day, the number of cars run, the length of route and the variations of traffic throughout the day. From these figures a definite rule could be adopted as to the number of cars to be run. The schedules of the car companies should be subject to the approval of the proper municipal authorities with a view to the providing of the public with proper facilities for travel.

The fifth evil is that resulting from strikes and lockouts. While the men may have our sympathies this evil can be considered only from the standpoint of public interest. On the other hand, the railroad companies are public servants and, as such, should be compelled to submit to arbitration all disputes arising between them and their employes. The Court of Appeals has decided that the State Legislature may regulate and reduce the fares, even though previous Legislatures should have made, in effect, contracts with such roads, giving them the power to charge higher fare. This being so, the Legislature possesses the power and can delegate such power to compel arbitration. While we advocate compulsory arbitration in regard to the railroads we do not in regard to any disputes of a private cháracter.

Having noticed the above evils, we would respectfully make the following recommendations: That a law to be passed providing, first, that in all cities above a certain population all railroads should be expected, from the date of the enactment of the law, to pay to their respective cities full annual compensation for the values of the franchise they enjoy, such payment to be either in superior service, low fares or in cash, and such values of the franchises to be determined as above suggested. Second, that the mayor of all such cities shall appoint a head of department to be known as the Department of Railroads, such department to have full power to appraise the properties of the railroads, investigate its receipts and determine what compensation the roads shall pay to the community; to have the planning out of the rail-

roads, and the offering for sale of franchises; to have power to revise schedules and to be an arbitration commissioner.

If some such scheme as this is not adopted municipal ownership is our only alternative.

Respectfully submitted,
GEORGE W. THOMPSON.

Brooklyn, N. Y., December 4, 1895.

- Q. You speak of the overcrowding, and most of the people who advocate the municipal ownership think that that would be prevented; do you think that that would be so? A. Yes.
- Q. You heard Mr. Hinrichs speak of the overcrowding of the public schools; is it not a fact that thousands and thousands of children can not get into the public schools because that overcrowding is a fact? A. Yes.
- Q. Can you indicate a place in the control of a municipality in the limits of a densely populated city that is not overcrowded as extensively as any street railroad in these two cities? A. Any place?
- Q. Or transportation company, or means of transit whatever, or public schools? A. Public schools are different; there is no excuse for public schools being overcrowded.
- Q. It exists just the same; it exists in nine out of ten cities in the State of New York to-day. A. I can not really see the bearing of that on the railroad question.
- Q. But if you take the public schools and use them to illustrate the feasibility of municipal ownership of a street railroad then you remember you will dispense with the overcrowding of the cars, it does? A. The overcrowding of schools is due to over-population; it is a very simple matter to put on more cars in a great many cases, but not so simple a matter to build up a few schools; a few years will build a public school, but a few days will put on more cars.
- Q. You can not excuse this by that, because this condition has existed since you were born in the city of New York in regard to the public schools; not to so great an extent, but it exists all over,

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and particularly in the growing cities. A. I acknowledge all you say there, but I do not think that will prove that there is no over-crowding and unnecessary overcrowding in our cars.

Q. No, I do not claim it does; but I simply say it will not dispense with it in the case of municipal ownership. A. No, I do not think it does, simply in municipal ownership.

Whidden Graham, called and sworn, testified:

Mr. Graham.— I have been appointed by the Manhattan Single Tax Club, the central organization of the New York system of single taxpayers and various single tax leagues. It is with knowledge that we control 60,000 votes, and 200,000 in the State, of whom we have knowledge. We are not a political party, but are organized for propaganda purposes, with the expectation before long to put in operation certain principles in economics. While the single taxpayers are not committed to any political party, there was in the platform of Henry George a municipal control of telephone and telegraph companies, and so forth. word, the single tax position on this important question, which we realize is a very important issue and have advocated for a number of years, and is now becoming an important issue in New York, Philadelphia, Detroit and Cleveland - in Detroit, there they have taken decided action - is because we recognize at the bottom of the whole question of street-car ownership and operation is a question of a privilege, of the right to this land. is why the single tax men take such an interest in the question, because the land question enters into it. You know there is no government control of steamships; there is no clamor that the State should buy the steamships of the country or that the State should go into the business of carrying freight and passengers. It is simply because free competition is possible. It is true large companies are making large profits. I do not think there have been many books written on the subject. We do not find socialistic orators attacking steamship companies simply because it is open and free. So it narrows itself down in this analysis to the

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simple question of how to secure to the people the use of a certain strip of land, which the street railroad franchise really is. Now, we believe there is earnestly demanded legislation which will guarantee all the profits over and above cost of investment and over and above cost of operation should go into the public purse. I am opposed to municipal ownership. Some single taxpayers believe in it. I am opposed to socialism in every form. I am opposed to public schools and public post-offices. I think they may be needed in our present state of society. I do not think you want academic discussion. You want something practical.

By Mr. Wade:

Q. That is, bearing on the railroad question? A. I do not know that anything is to be gained by calling names; at the same time I am opposed to anything savoring of socialism or paternalism; I am opposed to municipalities operating street railroads; if the city would do as it does with the docks in the present instance; there, if honestly carried out, Manhattan island would get the full value; as New York grows in population we will have, possibly, 3,000,000, and as commerce increases land becomes more valuable. I think if we rate the property on that system the city could get the greater portion of its revenue; it is not for the city to go into the business of running docks; all it would have to do is to put up franchises at certain intervals when the city will get the highest price for the privileges; that is not done at the present time; a statement was made by the president of the dock board that it was not the policy of the dock board to try to increase it to high figures, the sum charged for the wharf privileges; I think in making that statement Mr. O'Brien was entirely mistaken as to where the cost would fall; he labored under the apprehension that the people would have to pay it; in fact, they would not; it would come out of the steamship lines, and if the street railroads were compelled to pay more they would not raise their rates. believe the solution of the problem will be found in two directions; the first is giving, as far as possible, free competition, throwing open all the streets in which street railways can be operated No. 98.] 1235

profitably to any companies who choose to operate thereon, giving them that franchise for a certain term of years, and then, if at the end of the term of years, if they did not choose to pay a fair rental, then they get a fair price for their improvements, and the improvements go to the city; some claim you would not get companies anxious to invest large sums in them; my answer is they would; they do with the docks; with the street railroads once occupied in that position you would not find \$100,000,000 in the banks of New York city; I think there would be no question, if the companies would be guaranteed to the secure possession of the streets for a number of years, they would construct railroads; in regard to the possible competition; you know there is serious competition with the Manhattan Elevated Railway, because we have an improved street system by the Broadway cable lines; if we had half a dozen cable car and underground systems, and with the proper system, they would have been constructed before this; I think, myself, this city will make a great mistake if it undertakes to build and operate a rapid transit underground road; that is getting back to the abstract question again; but there is this principle, if the city would see to it that the franchises are not let in such a way so there would be possible collusion, that they should be compelled to operate railroads or abandon their franchises; efforts are being made; what has given us the improved Broadway cars? The Third avenue cars followed suit; the Broadway line wants competition, and it gives an improved service system on Columbus avenue; you find Columbus drawing away from Madison avenue also; for self-defense, because they want to make more money they will be compelled to give better service.

- Q. Do you know why the Twenty-eighth and Twenty-ninth are not operated? A. Yes; because they are compelled to pay too high percentage of the receipts; any company that attempts to pay 30 or 33 per cent. bids too high.
- Q. You think the city could get too high a rate? A. If any company pays more than it can afford; they should not be allowed to act as a dog in the manger; in regard to restrictive legislation

men who are lawyers are capable of drawing franchises to protect the municipality; all the right in the companies is that they do the committee is entirely correct; the government can not do it; I do not think it is an abstract or difficult question; I think gentlenet allow a street railway the monopoly of a certain highway; I know the objection will be made that in giving the future franchises that companies having, say, 40 or 50 miles of railways could afford to pay higher for a short street and let it lie idle than let it fall into the hands of a competing company; I do not think that would often be the case.

- Q. You would not grant a franchise, would you, that the company could simply let lay there without operating? A. No, sir; the gist of the whole street controversy lies not in the fact that we have had competition, but because the municipalities or the State have been criminal in granting franchises and have been blundering: I do not think it is criminal: I do not agree with Mr. Hinrichs that the majority of the people are intelligent; I think they are blind; however, the point of the single taxpayers, where a body of men have a decided opinion, is, they are agreed that in legislation, providing the control of municipal franchises to the right to the public of the full value of that highway should be strictly maintained; I think the majority are opposed to municipal control, although they are of varied opinions; they do insist that if we had free competition and franchises put up on a term of years there would be a great deal better service, not because people want to give better service, but they would be forced to by competition; as long as they have a monopoly they will not do that.
- Q. What is your business? A. I am a writer on financial and economic questions, and that has been my business for several years.
 - E. Stillman Doubleday, called and sworn, testified as follows:

Mr. Chairman and Gentlemen of the Committee.— Your time and also the time of these gentlemen called before you is too valu-

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able to be wasted or misused; therefore, to avoid the use of needless expressions common to extemporaneous speech, I have written what I have to say in as compact form and in language as brief as possible. I have chosen to confine myself entirely to matters informing you of certain indications and also definite expressions of the public sentiment in the city of Brooklyn. I shall not trespass, therefore, upon the time which other gentlemen from Brooklyn may employ in the discussion of details respecting several methods of reform and their practical application, each of which has in it the purpose of restoring to the public the most beneficent utility and most profitable return to the municipality for the use of that item of its property, the public streets.

The sovereign power of the State (which, by the way, if properly exercised, is the sovereign will of the people) has already conferred upon particular individuals and incorporated associations of individuals, especial advantages and privileges in the use of the streets; the streets in which primarily and justly all have common property and equal right.

To a certain extent the public have thus vacated their property in order that railroad companies may properly use and wisely employ it in their business of transportation.

Let us keep in mind the fact that railroad franchise is a particular privilege, a privilege granted to particular private persons or corporations; a privilege which exempts its holders, from the ordinary "rules of the road"—and from ordinary or what we may specialize as strictly equitable jurisdiction.

It has been frequently suggested of late that the municipality should resume absolute jurisdiction over its own streets; should repossess its highways, use its own property, become its own tenant, and thus secure to itself the full rental value for the use of its streets, and the suggestion has been made in the full belief that the property would be better cared for, and its owners, the public, better served if the owner were also the tenant. I think recent history in our city has in some degree invited this conclusion.

An approving public sentiment is essential, and public enlightenment is very desirable, before any radical readjustment of public functions or reformation of governmental methods should be attempted. No government among intelligent people will long continue to live, nor is fit to live, which does not rest upon the will and act only with the consent of the people governed.

Individual effort to enlighten the people open matters of political economy, are usually confronted by a suspicion that the person who essays the thankless task is only a self-seeker, that he has an axe to grind; and the suspicion is too often justified by the facts. This promotes a spirit of conservatism, arouses a resisting energy and encourages that pride of opinion which possesses each of us; the opinion quite independent of intellectual force, the security that we are right.

Yet it is not true that oftenest our opinions are simply the result of that which has consciously or unconsciously percolated into our minds from our environments and our associations, and are not the result of intelligent thought.

These very reliable teachers, experience, and the logic of events are certainly entirely exempt from the suspicion which (oftenmost unreservedly) attaches to individual efforts to enlighten the public.

In Brooklyn we have had experiences which have made us mindful of events and familiar with facts. The enlightment which we have gained from such schooling commends itself to our serious consideration. The popular minds of Brooklyn have ben digesting the railroad question. But how may we learn correctly, the popular opinion without personal confidence with each citizen of Brooklyn.

Events have answered that question for us. We all know the politician and his ways. We know that no unpopular proposition is relished by him. That even of a sublime truth or an equity which is not popular, he is more afraid, than is a monkey afraid of a snake. Personal or party success is his sin qui now. How to win popular approval, and so secure both, is the post-election predominating consideration.

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The recent very close election in Brooklyn was not an unmixed The unusual anxiety of the several mayoralty candidates led them to be very sensitive of the popular wish, inclined them to come close to the people. They took pains to learn and to surely know, the popular opinion upon this franchise question. appealed to it. Every party and faction in our recent Brooklyn election, declared with emphasis against giving away any more railroad franchises. That alone is significant. But to further emphasize evidence of the popularity of strict equity in these matters, Mr. Wurster (the now mayor elect), declared in fact, if not in these exact words, "No more franchises shall be granted to railroads in Brooklyn except upon condition of full annual compensation to the city for the use of such privilege. Mr. Grout (Democratic candidate), has uttered the same sentiment before, and he, too, rang the changes out throughout his campaign in his appeal to the people. Mr. Shepard (independent Democrat candidate) did the same and Mr. Smith (Prohibition candidate) also.

In consideration of these facts and the circumstances surrounding them, what better evidence could be asked for, that there is a general and well-established public sentiment in Brooklyn, demanding the taxation of railroad franchises (in future) up to the full annual value of the privilege of using them. Precisely as a private owner of property would exact and get full annual rental value for its use, if he consents to that another may use it.

Respecting public experience in the history of the present railroad franchise in Brooklyn, the misuse, and I think I may properly add, the abuse of these special privileges, has raised the question as to whether it was not unwise to have granted them at all. And it has been seriously suggested that it would be wise for the municipality to reassume entire jurisdiction over its streets, repossess and use, its own property, enjoy the profits of that which is its own, and secure thus, also, decent and orderly use of it.

Yet the other method appeals to us with great force. The reformatory method suggested by the recent distinct expression of public sentiment — i. e., that railroad tenants of our public streets be required to pay full annual rental value for the privilege. That

proposition is just, it is a long step in the right direction, it has evolved from experience and through events, and it is pre-eminently practicable because it already has the public approval. It is popular.

Thus I admit, that to require all future acquirers of street franchises to pay full annual compensation, brings us face to face with another problem, but the next one is an easy one if we solve the first one as proposed. The next question will be raised by these franchise holders who are very properly obliged to pay annual compensation. They will ask, what about those holding franchises which were obtained without any compensation to the city, or by payment of a lump sum at the time of acquirement, which sum, is distributed over all the years of the corporate existence, amounts to nothing, annually, or next to nothing.

The people are the legislators in their behalf after having met and answered the first demand suggested by the present attitude of our cities will answer, this second question which will be raised by those companies which pay for their privileges, without any hesitation whatever. Indeed, I think we are prepared to answer that second question before it is asked. Are we not?

E. STILLMAN DOUBLEDAY,

700 Lafayette Avenue, Brooklyn, N. Y.

- Q. Supposing you had a road paralleling the Brooklyn City road from the bridge, running out a block away, and you lived five miles out, and between these two roads, and this road was paying over to the city annually what you mean there by "a fair rental for the property occupied by it," which of those roads would you patronize? A. Which would I patronize?
- Q. That which charged five cents fare, and Brooklyn City which charged three cents fare? A. I would patronize the three-cent fare.
- Q. Which do you regard the most beneficial to the city and the people, to be gathering into the city an amount of money or securing the lowest fare? A. I would hardly disapprove the gathering into the city of an adequate amount of money, but I see clearly by

so much money as the treasury was provided with funds from such sources taxation upon industry and the products of industry could be reduced; you know, to tax an industry reduces the profits; that encourages the industries of the city and does not tax the industries any more than the other cities do.

Thomas P Ryan, called and sworn, testified:

By Mr. Wade:

- Q. If you have any further views to express to us that do not coincide with the others expressed? A. I represent labor organizations on the idea of absolute ownership and control of railroads; their idea is the absolute ownership and control; they consider the division between control and ownership of those roads would result in a jumble; in regard to the taxation of these roads upon the sworn statements of the officials of these roads they have no idea of submitting to anything of that kind at all, because it is almost certain that the action of the roads and banking officials in another State have proved to be perjuries; there is no reason to think they would be otherwise in the State of New York; I refer to the bureau of labor statistics of the State of Illinois, and one item I refer to, one item quoted and noticed in the book particularly is, that in the case of 27 banks in the city of Chicago which were under the State laws of Illinois, a man is compelled to make a lease and swear to it and is taxed on that statement; that these 27 banks made a statement of error of over 400 times their amount in holdings in taxation, when they made a different statement to the State auditor when their credit was in question; there is 27 in one city doing that one thing.
- Q Do you want to be understood that your labor organizations believe these people guilty of perjury? A. That the tendency of the law where an oath is to be taken of that kind, that the tendency of the law is to make perjury profitable.
- Q. You know the railroad commissioners send an expert to go into the books of the railroads of the city of Brooklyn? A. Yes, sir.

- Q. You know this committee got an expert and put him on those books? A. Yes, sir.
- Q. And all reports agreed, substantially? A. But you misunderstand me; that they did not wish the methods of taxation as applied to these railroads to be based on the sworn reports of the officials of those roads.
- Q. They fear they might be tempted to do these things? A. Yes; human nature enters in there, and human nature is likely to get all it can.
- Q. You think it might be better to tax you on what I swore you had than what you swore you had yourself? A. Yes, and your knowledge should come in such a manner that I could not deny it.
- Q. In other words, I come to your house and investigate, and you come to my house? A. Not at all; for your tax laws has been to prevent by the report in the State of Illinois, that your tax laws are favoring just this thing.

By Mr. Nixon:

Q. In other words, you do not believe personal property should be taxed? A. No, sir; and it is because of the taxation of personal property that these evils are existing; that is the statement I wish to make; the city of Chicago is bankrupt, and the Governor is willing to call for a special session of the Legislature; it comes from the interpolation of property, and they are doing it on sworn statements, and someone must be a perjurer; personally, I am a single tax-payer, and I do not believe the government can have any scientific method of taxation unless they simply tax land values; the organization to which I belong, the United Brotherhood of Carpenters and Joiners, has, by referendum vote, adopted that as their ideal of taxation; they have sent me to Albany before, as you remember.

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A. J. Boulton, called and sworn, testified:

By Mr. Wade:

I am also a member of a labor organization, the Stereotypers' Union, and I find a strong feeling in favor of municipal ownership. First, we feel quite certain municipal ownership would result in very much higher wages to the employes; and, secondly, we feel that municipal ownership would mean shorter hours; we also believe that municipal ownership would practically do away with about 75 per cent. of the loss of life that has taken place on the Brooklyn surface railroads.

- Q. You believe in municipal ownership because you think the hours would be shorter? A. Yes, sir.
- Q. The compensation better? A. Yes, and employes all treated better.
- Q. You think it would be a sort of co-operative association? A. We compare it with the bridge and the post-office, and then we also reason that anything that raises wages tends to distribute wealth; if the surface railroads and elevated railroads in Brooklyn were in the hands of the municipalities, there certainly would not be \$2.76 paid to bridge employes and \$1.70 paid to elevated railroad employes; \$2.76 a day on the bridge for eight hours, and on the elevated road the scale runs from \$1.50 to \$1.75, a day, and it is ten hours; I think it is pretty generally conceded that where people earn large wages those people as a rule spend their wages, and if the 7,000 employes of the surface roads in Brooklyn were earning the wages of the employes on the Brooklyn bridge, we think all kinds of business in Brooklyn would be very much improved; we think anything that tends to raise wages tends to benefit the whole community; and not just the people who receive the wages; we do not think that a system can be devised that will reconcile municipal ownership and control; I think, myself, as an individual, that it is about as impossible to reconcile municipal ownership of the streets and private control of the rolling stock as it is to reconcile oil and water, because their interests are diametrically opposed; the interest of the corporation is

to get the greatest amount of return for the smallest investment of money; the interest of the municipality would be to accommodate the public as much as possible; now, I think we see a very good illustration of that in the Brooklyn bridge, in reference to the overcrowding; true, morning and evening there is a great rush, but after 9 o'clock in the morning or prior to 5 o'clock in the afternoon, you can always have a seat on the Brooklyn bridge, and you do not have to wait five or ten minutes; it is not so on the elevated, and it is not so even on the trolley; what is the trouble? the cars are not on that they run night and morning; take the Third Avenue in the morning; those trains run at about thirty seconds leeway, and from 10 to 3.30 in the afternoon they run about six minutes leeway; why is it? because they want a crowded train in the day.

- Q. The same thing, only to a lesser extent, is true on the Brooklyn bridge? A. They run a sufficient number so any time during the day, after 9 o'clock in the morning, you can get a seat.
- Q. There is five hours it is crowded? A. That is unavoidable, because of the great number of people; here on the elevated you have to wait five minutes, and on the bridge you never have to wait but three minutes; then, again, we find that the wages on the bridge attracts a superior class of men; in my experience in traveling through this country I have never seen as fine a class of railroad men as I have seen on the bridge; high wages attracts superior intelligence; high wages causes men to take interest in their work in order to hold their position; a man working at a dollar and a half a day has not much at stake; I believe, if the road paid motormen \$3 a day there would not be one death occur where there is ten, for if you pay \$3 a day you obtain the same class that handles the throttle of a locomotive, and, as a consequence, life would have been saved; we consider that nearly all the discussions that go on in the Legislature is all about property rights; as working people, we are not as much interested in property rights as human life; we believe human life is higher than property rights; the city of Toronto, when they granted this last franchise, dealt with within this pamphlet—it is a pamphlet

entitled "Municipal Ownership League," and this tells different systems, and it shows the Toronto system is the best system existing in those systems to-day, and it gives a history of that system; when they granted this last charter to the railroad corporation in Toronto, they put in a clause that the employes should have to be paid daily a certain wages, and the reason it was put there was this: they say if you allow corporations to employ the cheapest labor possible, they will run over our citizens in the streets, but if you compel them to pay not less than a certain rate of wages, and leave them the power to select them, they will buy the best intelligence.

- Q. Do you think the accidents in Brooklyn are largely attributable to the ignorance of the employes? A. Yes, sir; that the employes are not competent to fill their positions at all; that was clearly shown during the strike.
- Q. Then you think they are paying enough for the character of services they are getting? A. They are paying the market price.
- Q. If it is of the character you describe, almost any price would be exorbitant, if they have men who do not know any better than to run over a man? A. I will give you an illustration; during the strike a man was put onto the Sackett Street line who had been discharged off from the Atlantic system for incompetency; in the two weeks he was employed they had seven different accidents; they discharged him and he was largely in the debt of the company when he was discharged; his accidents were partly owing to the fact that one arm was paralyzed; when the strike occurred they re-employed that man and others, and on a car that the man was operating, that car ran over a child on Sackett street because he could not stop the car.
- Q. Do these men belong to labor organizations, employed by the road? A. Some do and some do not; before the strike they nearly all did.
- Q. While you were fixing the rate of wages would you also provide each employe should be a member of some labor organization? A. No, sir; I would leave the company to employ the men

they wished; we are not in favor of the system; we are in favor of the city owning and operating the road.

- Q. Would you leave the city free to employ whom they saw fit? A. Yes, sir; labor organizations, as a rule, leave that to the employers, to employ whom they saw fit.
- Q. Where? A. The reason of the men in Brooklyn who are not members of a labor organization is because they have not worked long enough at the business; any man who has been shown to be competent in the business can become a member; labor organizations are always looking for acceptable members.
- Q. They do not favor any concern's employing indiscriminately union men and non-union men as a class? A. No; they do not.
- Q. You did answer that difference and I thought you were mistaken. A. We would not interfere with the system over there, with the city; there is a difference in this case; the railroad employes of Brooklyn are not members of a union; I am; they are most of them Knights of Labor; the Knights of Labor do not prohibit their men from working with men that are not Knights, so that is why I made that statement; if the city owned the railroads there would be no compulsion for the city to employ Knights of Labor because they work in every case with men that are not Knights and do not strike because the other men are not Knights; trade union men, as a rule, they want them strictly union men or they won't work, and I am a member of a trade union and I am also a member of the Knights; now, this little pamphlet here contains what Mr. Hindrichs referred to; I will leave that with you.

(Pamphlet received and marked in evidence.)

Recess until Thursday morning, December 5, 1895, at 10 o'clock a. m.

Edward F. J. Gaynor, called and sworn, testified:

By Mr. Wade:

Q. You are engaged in what business? A. I am the auditor of the Manhattan Railway Company.

- Q. How long have you occupied that position? A. Fifteen years.
- Q. And were you connected with the road in any way prior to the time you were made auditor? A. Yes, sir.
- Q. In what capacity? A. I entered the service of the New York Elevated Railway Company on the first of Sepember, 1877.
 - Q. The first day of September? A. First of September, 1877.
 - Q. In what capacity then? A. I was then clerk; junior clerk.
- Q. And you were made auditor when? A. On the first of April, 1881, auditor of the Manhattan Railway Company.
- Q. What road or roads does that company operate? A. The Manhattan Railway Company now operates the lines of the New York Elevated Company, the Metropolitan Elevated Railway Company, and the Suburban Rapid Transit Company.
- Q. And what comprises the lines of the New York Elevated? A. The New York Elevated Railway Company's lines consist of the Ninth avenue line on the west side of the city, and the Third avenue line on the east side of the city; the Metropolitan lines consist of the Sixth avenue on the west side of the city, and the Sixth avenue on the side; while the Suburban Rapid Transit line begins just at the Harlem river and runs through the annexed district to One Hundred and Seventy-seventh street and Third avenue.
- Q. Mr. Davies suggests that part of the Ninth Avenue line was a joint construction? A. Yes; I will state that; the line as laid down by the Rapid Transit Commission for the New York Elevated Railway Company and the Metropolitan Railway Company were joined on certain points on the east and west side of the city; on the east side the intersections were extended from Beaver and Center to Chatham square, and also from the intersection of Chambers and Park row towards Chatham square; and on the west side of the city the joint line extended from the intersection at Fiftythird and Ninth avenue to Eighty-third and Ninth avenue; over the lines at those points the Metropolitan and the Manhattan Elevated had equal rights.
- Q. North of Eighty-third street on the west side? A. North of Eighty-third on the west side was solely the property of the

Metropolitan Elevated Railway company, and by reason or one original route of others extended on that side west and up Tenth avenue to Fort George.

- Q. These three companies are they still in existence? A. The capital stock of each of the three companies has been exchanged for the consolidated stock of the Manhattan Railway Company, and the certificates to that effect have been filed with the Secretary of State.
- Q. It is a consolidation? A. Therefore the Manhattan Railway Company is the owner of the rights and franchises of the three companies.
- Q. They all became consolidated under the statute? A. Yes, sir.
- Q. Which provided for the retirement of the capital stock of the three companies and the stock of the new company? A. That is right.
- Q. So now there is but the one company operating the elevated roads of the city of New York? A. Yes, sir.
- Q. And but one company interested in the roads and their operation? A. That is right, sir.
- Q. Do you know when the new elevated railway company was incorporated? A. Yes, sir.
 - Q. When?

(Witness refers to memorandum.)

- A. October 27, 1871, the New York Elevated Railway Company.
- Q. And the Manhattan? A. November 10, 1875.
- Q. And the Metropolitan Elevated Railway Company? A. June 17, 1872; and the Suburban, to make it perfect, March 6, 1880.
 - Q. The Suburban? A. The Suburban Rapid Transit Company.
 - Q. Did they ever build any road? A. Yes, sir.
- Q. What part of the road did the Suburban build? A. The Suburban branch extended from the south side of Harlem to One Hundred and Seventy-third and Seventh avenue.
- Q. The consolidation then was the consolidation of the four companies, the New York Elevated, the Manhattan, the Metro-

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politan and Suburban—and any others? A. The New York Elevated Railway Company and the Metropolitan Elevated Railway Company leased their lines to the Manhattan Railway Company under agreement datel May 10, 1879; the consolidation or lease, rather, to take effect from the first day of February, 1879; the Suburban Rapid Transit lease was made on or about the third day of June, 1891.

- Q. Is the Suburban Company in existence now? A. No, sir; the stock of that company has been exchanged for consolidated stock of the Manhattan Railway Company just the same as the stock of the other two companies have been exchanged.
- Q. The other three? A. The two; the New York and Metropolitan exchanged for the Manhattan.
- Q. How long do these leases run? A. Nine hundred and ninetynine years, I think.
- Q. At what rental do they provide for? A. The rental originally agreed upon.
- Q. Yes? A. At the time of making the lease on the part of the New York and Metropolitan Companies to the Manhattan Company the capital stock of each of these companies was \$6,500,000.
- Q. That is the Metropolitan and New York elevated? A. Yes, sir; and the Manhattan agreed to pay them each 10 per cent. upon that capital stock, each the sum of \$650,000 a year to each of the companies, in addition to paying the interest upon their bonds at that time, and a further payment of \$10,000 a year.
- Q. The interest upon the bonds; what was the bonded indebtedness of the New York Elevated? A. At that time, \$8,500,000.
 - Q. Bearing what rate of interest? A. Seven per cent.
- Q. And the Metropolitan, what was the bonded indebtedness? A. Eight million five hundred thousand dollars, carrying 6 per cent.
- Q. Now, that was the way the Manhattan first acquired possession of the New York Elevated road, was it? A. Yes. sir.
 - Q. And the Metropolitan? A. Yes, sir.
- Q. At some time was the terms of that lease changed at all, or was that lease put out of existence on the consolidation? A. On

the 1st of July, 1881, the Manhattan Railway Company defaulted upon the payment then due under the conditions of this lease we have been speaking of, and the company went into the hands of a receiver, and so continued until the 26th of the following October, when a new lease was entered into whereby the guaranteed dividend on the stock of the parent companies was reduced to 6 per cent. per annum, the payment of the interest, and the \$10,000 a year was continued, of course; that condition of things existed until the 6th of May, 1884, when the New York Company insisted upon the return of its property to itself, and the New York company operated its line from about the 6th of May, 1884, to about the 1st of August, 1884, when the present existing arrangement between the three companies, the New York, Metropolitan and Manhattan went into effect, which provided for the surrender of the original \$6,500,000 of New York stock into Manhattan Consolidated stock at 120, the \$6,500,000 of Metropolitan stock into Manhattan Consolidated at 110 and the surrender and exchange of the original old Manhattan stock at 85; since that time there has been no change, except the acquiring of the Suburban Rapid Transit property.

- Q. That is, the New York Elevated stock was put in at 120 to the new company? A. Yes, sir.
 - Q. And the Manhattan at 85? A. Yes, sir.
- Q. And the capital stock of the Manhattan at that time fixed at \$13,000,000? A. Yes, sir; that is, of the new company at \$26,000,000; the old company was \$13,000,000; the new company was \$26,000,000, because it absorbed the stock of the other two, which made \$13,000,000, which added to the \$13,000,000, made \$26,000,000.
- Q. The Manhattan company at that time was capitalized at \$13,000,000? A. Yes, sir.
- Q. So it made the capital stock of the Manhattan after acquiring the stock of the New York and Metropolitan \$26,000,000? A. Yes, sir.
 - Q. That was in 1884? A. Yes, sir.

- Q. At that time, Mr. Gaynor, did the Manhattan assume all the indebtedness of the two companies? A. Yes, sir.
- Q. Which then equalled what amount, taking the three together? A. The outstanding bonds of the New York Elevated at that time was the \$8,500,000 first mortgage 7's, to which we have referred, and of the Metropolitan company there was \$10,818,000 of its first mortgage 6's, and \$4,000,000 of the Metropolitan seconds, carrying 6 per cent.
- Q. And what of the Manhattan? A. The Manhattan had no bonded debt at that time.
 - Q. That is \$23,318,000? A. Yes, sir.
- Q. Has that line been extended since then, except the acquiring of the Suburban? A. There have been a great many improvements made, more particularly the terminal improvements, and there has been a material addition to the trackage by reason of putting in the third track on the Third Avenue line, and also on this Second Avenue line for part of the way, and also on the Ninth Avenue line.
- Q. But has the road been extended into any other districts since 1884, except by the acquiring of the Suburban? A. The Manhattan Railway Company furnished the work of constructing the Second Avenue line, and I am not prepared to say just at present whether the Second Avenue line was wholly finished in 1884.
- Q. How much road was the Suburban to operate? A. Three and one-half, extending from the north side at One Hundred and Twenty-ninth street, just south of the Harlem river, to One Hundred and Seventy-seventh street and Third avenue.
- Q. And that was acquired when? A. June 3, 1891; on or about June 3, 1891.
- Q. At what was that stock at that time? A. Four million dollars.
- Q. And was its stock retired and stock of the Manhattan issued? A. Yes, sir.
 - Q. At what prices was it retired? A. At dollar for dollar.
- Q. So then the stock of the Manhattan was increased at that time? A. To \$30,000,000.

- Q. Thirty million dollars? A. Yes, sir.
- Q. And did it have any bonded indebtedness? A. No, sir.
- Q. That is, the Suburban? A. It had no bonded indebtedness.
- Q. And of course the Manhattan had then acquired all the rights and property of the other three companies? A. Yes, sir.
 - Q. And it now operates them? A. Yes, sir.
- Q. Do you know what the cost of the Elevated road per mile is, that is, the actual?

(Witness refers to memorandum.)

Mr. Davies.— Do you mean the cost in money or cost in stock and bonds?

- A. Do you mean the cash cost?
- Q. Yes? A. No, sir; the cost of the road, equipment and real estate, as entered upon the books and in accordance with all our records, is the cash cost, is the cost.
- Q. Yes, it has stock on our books to day charged with about \$53,000,000? A. Yes, sir.
- Q. Fifty-three million three hundred and eighteen thousand dollars, is it? A. My last report to the Railroad Commissioners, the road and equipment, \$56,585,329.
- Q. You have given me \$26,000,000 of the stock, \$23,318,000 of bonds, and then an increase of stock of \$4,000,000 at the time the Suburban was then taken in? A. Yes, sir.
- Q. Now, has the stock been increased since that time? A. No, the stock has not been increased, but there was an issue of \$1,000,000 of New York Elevated Railway debenture bonds.
 - Q. When was that? A. That was in 1886.
- Q. Any others? A. And there has been issued \$22,599,000, of Manhattan 4 per cent. bonds.
- Q. How much? A. Twenty-two million nine hundred and ninety-nine thousand dollars, of which \$8,925,000 is issued for the purpose of retiring the \$8,500,000 of New York Elevated Railroad 7's to which we have been referring; part of them have been retired, and the remainder will be retired on the 1st of January, 1896.

- Q. When did you issue the \$22,000,000? A. That amount of Manhattan 4's has been issued at various times since April 1, 1890.
- Q. What is the bonded indebtedness of the company to-day? A. The outstanding bonded indebtedness of the three companies to-day is \$46,596,000, from which, however, it is prepared to take—
- Q. Forty-six million dollars what? A. Forty-six million five hundred and ninety-six thousand dollars.
- Q. To take what? A. To take the \$8,500,000 of the New York first mortgage 7's, for the reason that those figures which I have given of \$40,000,000 includes the Manhattan 4's which have been issued for the purpose of retiring the \$8,000,000 7's.
- Q. So the company on your books is actually charged with \$38,346,000 of the bonded indebtedness? A. Yes, sir.
 - Q. And with \$30,000,000 stock? A. Yes, sir.
- Q. Is the \$1,000,000 debenture bonds included in that? A. Yes, sir.
- Q. Then your company stands charged to-day on the books of the company with stocks and bonds, \$68,346,000? A. Yes, sir.
- Q. How many miles of road have you? A. Thirty-six miles of double track; 102 miles of single track.
- Q. That includes the third track that you have mentioned? A. Yes, sir.
- Q. After the 1st of January the entire bonded indebtedness of the company will be drawing interest at the rate of 4 per cent., if I understand you correctly? A. No, sir; the New York Railroad debenture bonds will be outstanding, \$1,000,000, 5 per cent.; the Metropolitan first mortgage bonds, \$10,318,000 carries 6 per cent., and the Metropolitan, \$8,000,000, carries 6 per cent. also, and the Manhattan 4's carry 4 per cent.
- Q. How long do those Manhattan 4's run? A. One hundred years.
- Q. Does your company pay the city anything for the use of the streets for the road, and if so, what? A. The elevated railway companies, from their inception, have paid the city of New York in taxes.

- Q. I do not mean by taxation as their property is taxed, but for the franchises, do you pay a percentage of your receipts to the city, or a gross sum to the city for occupying the streets? A. Would your question cover the tax on our structure?
- Q. No; if I rightly understand what you mean, it does not; do you pay anything for the privilege?

By Mr. Nixon:

Q. Outside of your regular taxes or the appraisal or the assessment of your property? A. No, sir.

By Mr. Wade:

- Q. The old New York line, did that pay anything for the franchises? A. The old New York Railway Company and the Manhattan Railway Company, down to a comparatively recent period, paid under what was known as the old 5 per cent. tax; paid something like between \$300,000 and \$400,000 to the city.
- Q. What was that, a percentage on its receipts? A. That was a tax of 5 per cent. upon the net income of the New York Elevated Railroad line.
- Mr. Davies.—That is still in litigation, Mr. Wade, as to what that means.
- Q. What is the assessed valuation of the property of the Manhattan Company, both real and personal; that is, road, real estate and equipment?
- Mr. Davies.—There are two assessments against us, one for our real estate and one for personal property.
- Q. What is the assessed valuation of your real estate? A. The assessed value of the real estate held in fee is about \$2,300,000, and assessed value of the New York Elevated Railroad structure, about \$8,200,000, and of the Suburban, is \$1,100,000.
- Q. And the capital stock? A. The capital stock of the Manhattan assessed, 1895, at \$17,000,000.
- Q. It is a grand total of what; I did not know but you had it footed there? A. That would be between \$21,000,000 and \$22,000,000.

Mr. Davies .- Much more than that?

- A. We are now speaking of the assessed value.
- Mr. Davies.— The assessed value of all the real and personal property is what Mr. Wade wants.
- A. I said between \$21,000,000 and \$22,000,000; I should have said \$31,000,000 and \$32,000,000.
- Q. How is it; explain that capital stock assessment by your city? A. That is the assessment which is made by the city against the company under the head of personal tax, and in the city's method of arriving at it for the year 1895 —
- Q. The stock is not owned by the company; it is owed by the company? A. I beg pardon.
- Q. The stock is not owned by the company; it is owed by the company? A. That is very true.
- Mr. Gleason.— That is true. All corporations are assessed that way except the national banks.
- Mr. Davies.—All corporations are assessed that way. They are all assessed the same way here in New York.
- Q. Now, Mr. Gaynor, have you got there the amount of the tax which the Manhattan road pays to the city of New York annually? A. Yes, sir.
 - Q. Will you give it? A. Shall I state it?
- Q. Take last year; I do not care to incumber the record with more; as many as you like, Mr. Gaynor; I do not care. A. For the year 1895, the taxes assessed by the city of New York against the elevated railroad properties was \$590,243.
- Q. And is that more than it was the year previous? A. That is for the year previous.
- Q. Give the year previous, if it will not take too much time, and the year previous to that, also? A. For the year 1894 it was \$564,300; that is the city.
- Q. Yes. A. While the State taxes for 1895 will be \$95,000, and for the year 1894, \$93,000; while the total amount of taxes; that is, the State taxes on the earnings, and the State tax on the capital stock—
- Q. That includes all the taxes that you pay to the Comptroller? A. Yes, sir.

- Q. Ninety-five thousand dollars in 1895 and \$93,000 in 1894? A. That is the State; yes, sir; for the calendar year 1895; I have given you the figures for 1894 and 1895.
- Q. Yes, go on. A. Now, the total taxes which the elevated railway companies have paid to the city at the present time.
- Q. That is, the total since the organization of the companies? A. Yes, sir; is \$6,621,000 to the State, \$1,221,000, making a total of \$7,842,000.
- Q. Now, Mr. Davies, I understand this question of franchises between the company and the city is in litigation?

Mr. Davies.—Yes.

Q. This does not include everything?

Mr. Davies.— That \$95,000 is money actually paid to the State Comptroller.

Q. I am speaking of the year 1895.

Mr. Davies.— These amounts include only amounts actually paid in cash and not sums claimed and not paid.

- A. Yes, Mr. Davies; we have not paid our tax for 1895; that is the only exception; we will probably have to pay it; it is in the same tax as in 1894, and that is paid.
- Q. Are you familiar, Mr. Gaynor, with the operations of the road? A. I do not think I would be the proper witness to testify on that point.
 - Q. Or with the rules governing its operation? A. No, sir.
- Q. Now, then, on the books of your company you have got charged the \$46,596,000 of the bonds, and the \$30,000,000 of stock?

 A. Less the \$8,500,000.
- Mr. Davies.— Let me say, to avoid any misapprehension, these city taxes of 1894 and 1895 are also in litigation; when I say we expect to pay the taxes of 1895, I mean we may have to pay it in settlement of the question.

Mr. Wade.—I will try and keep clear of any matters you have in litigation.

Mr. Davies.— We are not satisfied with our personal taxation for those years.

- Q. Supposing, Mr. Gaynor, that I may be sure and understand this; you have retired this \$8,500,000 of New York Elevated 7's the 1st of January; then your bonded indebtedness will be what? A. Will be \$38,096,000.
- Q. Yes; so, in the \$46,596,000 you gave me, the \$8,500,000 of 7's was charged practically twice, because one was intended to retire the other? A. Yes, sir.
- Q. I understand it now; on the books of your company your road is charged with \$68,096,000 stock and bonds? A. Yes, sir.
- Q. And what other items, if any? A. That covers the entire cost.
 - Q. That covers cost of every character? A. Yes, sir.
- Q. Construction, equipment, expense, real estate and everything else? A. Yes, sir.
- Q. That is the aggregate of the expense account, construction account, real estate account and equipment account, and the whole business? A. When you speak of the expense account I understand you to mean independent of the operating expenses?
 - Q.\Certainly. A. Yes.
- Q. Because that, I suppose, is taken care of out of the receipts? A. Yes, sir.
- Q. And so far as you are concerned, the amounts charged to construction there may be arbitrary amounts? A. No; I do not think so; the cost of the roads is, as I have stated, is the cash cost and the outstanding bonds; cash, stock and bonds.
- Q. That is, so much cash, so much stock and so much bonds given for construction? A. You can put it that way; yes, sir.
- Q. That makes it about an arbitrary amount, does it not; take a scheme of this kind, the construction of a road; everything about it is experimental and problematical, and the stock at such a time has no fixed value based upon tangible assets? A. This morning I read some of the testimony given by one of the witnesses yesterday, and it applies at this point very properly; the construction accounts have been charged with the face of these bonds issued by the company; it is within my personal knowledge, in the days of the early struggles,

it was very difficult, if not almost impossible, to dispose of the bonds which we have been talking about; it was necessary that those bonds should be disposed of at a figure to make it an object for men to risk their money; of course, the construction account stands charged with the face of the bonds.

- Q. You charge on your books an arbitrary sum, practically? A. So far as that particular feature of it is concerned.
- Q. So far as it pertains to actual cost it is a forced balance? A. Hardly that; it is certainly the cost of these properties to this company.
- Q. Yes; when the company puts out a stock of its own at a fraction. A. Yes, sir.
- Q. And the bonds also? A. Yes; and in that sense it has cost the companies these amounts; yes, sir.
- Q. I think you told me you were familiar with the actual cash cost of a mile of elevated road? A. Cash cost, no, sir; because we have never distinguished between them.
- Q. Of course, you have to audit the bills, and I did not know but your experience might enable you to state what an average mile of elevated road would cost? A. No; I could not state that.
- Q. I suppose there is some special construction that costs more? A. Oh, yes.
- Q. What are daily receipts for the last A. The receipts of our road —
- Q. Or you can give it for the year, if you wish, for you have it footed up, I suppose, to the 1st of July? A. Our receipts for the last fiscal year from the operation of the lines was \$9,397,572; the gross earnings, \$9,397,572; the operating expenses, excluding all taxes, was \$5,413,964, making the net earnings \$3,983,608, while the income from sources other than operation was \$287,000.
- Q. Is that to be added to that? A. That is to be added to the net earnings, which made the gross income from all sources \$4,270,742; the interest on the funded debt was \$2,095,175, and the taxes \$652,722, making the total deductions from the gross income \$2,748,694, giving as a net income \$1,522,048.

- Q. Have you figured out there what percentage of earnings is used by the operating expenses alone? A. I can tell you in just a minute (witness makes a computation); 59 per cent.
- Q. What dividends were declared during that year? A. Six per cent., on \$30,000,000 of capital; \$1,800,000.
- Q. So you had a surplus out of which to pay? A. No; that year we had a deficiency of \$277,000.
- Q. You must have had a surplus to utilize in paying the dividends? A. Prior to the opening of the year our surplus was \$5,623,000, prior to the opening of this fiscal year we have been speaking of.
 - Q. The fiscal year of 1895? A. Yes, sir.
- Q. Or, in other words, the 1st of July, 1894? A. Yes; July 1, 1894.
 - Q. You had a cash surplus of \$5,000,000? A. Yes.
- Q. Was that money used in any way? A. That money was used for the general purposes of the company; the balance sheet of that date shows that cash and cash assets on hand were \$962,000, showing that the balance of the money has been used by the company for its general purposes, betterments, and so forth.
- Q. Then you gained by a surplus your books show a surplus? A. Yes, sir.
- Q. That had not been a cash surplus? A. No, sir; that represents the net profit from the operations of the line.
- Q. Yes; and gone into betterments and improvements, and so forth? A. Yes.
- Q. Do you know how any of the stock of any of these companies was issued, and what for? A. Yes, sir.
- Q. What ones? A. The New York Elevated Railroad Company was issued for cash, dollar for dollar.
- Q. Actually paid into the treasury? A. Yes, sir; the stock of the Metropolitan Company was issued to the New York Loan and Improvement Company for road built under the contract.
- Q. Issued to what? A. To the New York Loan and Improvement Company, which was the construction company that built the original Metropolitan lines.

- Q. Who composed that company? A. The directors of the company whose names I now recall are —
- Q. Were they in any way connected with the railroad? A. That were connected with the Metropolitan Railroad Company?
 - Q. Yes. A. As well as the New York Improvement Company?
- Q. Yes. A. George M. Pullman, Hosea Nevarre, Horace M. Porter.
 - Q. They were the men building the road? A. Yes, sir.
 - Q. They composed the construction company? A. Yes, sir.
- Q. Then a construction company was organized for the purpose of constructing this road? A. Yes, sir.
- Q. By the people who were promoting the enterprise? A. Yes, sir.
- Q. And, as a construction company, they contracted with themselves as railroad men, and built the road; practically that? A. The fact is that the directors of the two companies were largely identical; I do not know whether they were altogether so, but the contract was made between the two companies under which the Metropolitan road was to pay for its completed road in stock and bonds.
- Q. Now, then, there would not be any way, then, Mr. Gaynor, for the books of the company, of the railroad company, to show the cash cost of the road? A. No, sir.
- Q. It would not be possible to get that onto the books of the railway company? A. No, sir.
- Q. It would require reference to the construction company's books? A. Yes, sir.
- Q. Could you, Mr. Gaynor, tell how many passengers your road carried in a year? A. Yes, sir; for the year ending September 30, 1895, we carried 188,072,645, and the total passengers carried up to date is 2,410,845,487.
- Q. In the present year? A. That is up to September 30th, from the opening of the road up to September 30th.
 - Q. And never killed a passenger?
 - Mr. Davies.—We have never killed a passenger on the trains.

- Q. How many employes has this company? A. Very close to 6.000.
- Q. What wages are paid the trainmen? A. The engineers are paid \$3.50 a day.
- Q. For how many hours' work? A. Nine hours' work; firemen are paid \$2 a day; that is, in both cases, I give you the senior rates; when a man is first appointed he gets \$3.25 a day; the maximum rate is \$3.50; conductors \$2.30, guards \$1.85; would you like me to go through the list; those are the general ones.
 - Q. Generally; I do not care to spend much time over it. Mr. Davies.—There are very strict civil service rules.
- Q. Describe that; tell us what system of promotion, if any, that you have. A. Taking up, first, the engineer; a man is appointed as fireman or engine wiper; if, as a fireman, he serves the first nine months at \$1.75, and after that he gets \$2, and after a term of service which fits him for an engineer he is appointed, and an acting engineer at \$3 a day for a short time, and then he becomes a full-fledged engineer at \$3.25 the first year, and after that he gets \$3.50; taking the case of a doorman, a guard gets the first nine months \$1.50, the next year \$1.65, the next year \$1.75, next year \$1.85 a day, and by that time he is almost sure to be an acting conductor, when he gets \$2 a day, and when appointed conductor he gets \$2.10, second year \$2.20, and after that \$2.30.
- Q. You do not appoint people to the position of conductor that have not served in any other capacity? A. No, sir.
- Q. What is the duty of the guard? A. The conductor is the man who stands on the first platform; that is, on the platform between the first and second cars, and his duty is identical with the guards', with the exception that the guards signal to him when their gates are closed, and he in turn signals to the engineer to start the train.
 - Q. He starts the train? A. Yes, sir.
- Q. And the new guard commences at the rear end? A. Yes, sir.

- Q. And a person could not be appointed engineer on your road without having served in some capacity? A. No, sir.
- Q. Supposing he were a locomotive engineer? A. He would have to begin as a fireman, and I think at the present time he would have to begin even lower than as an engine wiper; when the road was first opened it was necessary to appoint men to these positions.
- Q. Of course; you had to have an engineer on the first engine run? A. Yes.
- Q. Supposing he has been an engineer on another elevated road? A. That would not make any difference; he would have to begin with us in the ranks with the others.
- Q. You put him in at the foot of the ladder, no matter who he is or where he is from? A. Exactly.
- Q. Do you hear complaints from the people of the overcrowding of cars on your road? A. There is no doubt that overcrowding does exist on all railways in the city, ours as well as the others.
- Q. Do you run as many trains as you think it is practical? A. We run over 3,000 trains a day.
- Q. Your greatest traffic, I suppose, is morning and evening? A. Yes; down in the morning between 7 and 9, and up in the evening between 4:30 and 6:30.
- Q. Do you know the fact, Mr. Gaynor, that there has been considerable complaint by the patrons of your road on your method of lighting? A. I know that to be a fact.
- Q. In your cars and stations? A. I know that to be a fact; yes, sir.
- Q. Do you know whether the company has taken the subject up to consider it? A. I know that in a general way, as I know a great many other things that do not belong to my immediate department.
 - Q. If the general manager were here I should —

Mr. Davis.—Mr. Gould is here.

Mr. Wade.—Is he familiar with that?

Mr. Davies.— Yes.

Mr. Wade. Then I will suspend your examination.

George Gould, called and sworn, testified:

By Mr. Wade:

- Q. You reside in the city of New York? A. No, sir; Lakewood, New Jersey.
- Q. Are you interested in the elevated railway system of the city of New York? A. Yes, sir; both as a large owner of the property and as president.
- Q. How long have you been the president of the road? A. About not quite three years, I believe.
 - Q. And as such do you become familiar with its operation and management? A. Yes, sir.
 - Q. And you know all steps taken looking towards an improvement in your system? A. Yes, sir.
 - Q. Mr. Davies suggests you have been the director of the company for a considerable period of time? A. Yes; over 10 years, I think, sir; I was also vice-president a couple of years prior to my father's death.
 - Q. Mr. Gould, have you made the subject of rapid transit in the city of New York considerable of a study? A. I have.
 - Q. And investigated the subject in various ways to determine the best means and methods? A. Yes, sir.
 - Q. And, of course, your experience makes you quite familiar with the elevated system? A. Yes, sir.
 - Q. Have you examined or looked into the underground systems abroad? A. I have in a general way.
 - Q. In London? A. Yes.
 - Q. The physical condition, Mr. Gould, in a city is very likely to be an important feature or factor to be taken into consideration in determining the best method of transit the physical condition of the city and the business of the city? A. Yes; it is.
 - Q. In your own city here the great volume of business is concentrated within a comparatively small circumference? A. The business; yes, sir; the business of the city at the lower end and the residence portion at the upper end; that makes a great volume of traffic down in the morning and a great volume of traffic up in the afternoon, towards night, either going to and from work.

- Q. And the question of rapid transit has been, or the minds of the people of the city of New York have been on the question of rapid transit for a good many years? A. Yes, sir.
- Q. And the papers have been full of it; and I think your father had this matter under consideration and investigation for quite a number of years, did he not? A. He did.
- Q. Endeavoring to devise the best scheme he could for rapid transit in the city? A. Yes, sir.
- Q. What is your own opinion of an underground railway system in the city; is it feasible or otherwise? A. I think it is possible to build one; I do not think it is a practicable thing financially, nor do I think it would satisfy the public after it was built; almost any engineering project is feasible if sufficient money is put into it, even the Panama canal.
- Q. By the use of that term in this business it would naturally involve a paying investment as one feature, and an accommodation to the patrons of the road as another? A. I do not think that an underground road can ever be a paying investment in this city; it is not a paying investment in London, where the circumstances are better for it than they are here.
- Q. Is it a popular thing in London? A. No, sir; it is not; it is not liked by the public at large.
- Q. They have one in operation by electricity there now? A. Yes, sir.
 - Q. Have you been over that? A. No, sir.
- Q. I have been told that is more popular than the other? A. But, financially, it does not pay; I refer to the new one.
- Q. Are the people north of the northerly line of your road desirous that you continue the line still further out? A. Yes, sir; they are; especially, the people living at Fort George, and also, I think, at Fordham on the east side and Fort George on the west.
- Q. Have you received the proposition from the city, or the mayor of the city in reference to extending your line to Fort George? A. The present mayor?
 - Q. No; his predecessor? A. No, sir; I never received any

proposition from the mayor; I had some negotiations with the Rapid Transit Commission.

- Q. You have been engaged recently in laying a third track on your Third avenue line and Ninth avenue? A. We have been putting in a system of switches and connecting the two tracks, which allow us to use it in places as an extra track, and we use it for express trains; we run an express service which does not interfere with the local service; from Fourteenth street north on the west side.
- Q. Was a proposition made to you by the mayor, or some of the city officials to grant the right to extend to Fort George and on to the city limits and lay the third track on Sixth and Ninth avenues and a loop at the Battery, and cancel all claims then pending by your company to the city, \$150,000 annually, or that in substance? A. I think there was a proposition made by the Rapid Transit Commission; I do not remember of having any negotiations with the mayor or anyone else in fact, except the Rapid Transit Commission; I think that was about the proposition; no, no; their proposition, if I remember rightly, was to build third tracks to extend to Fort George and also to Fordham; that I was willing to do, but they insisted and made it a sina qui non that we should build out the Kings Bridge road from where it intersected the Tenth or Fort Orange line to the city limits; well, as that is a very sparsely settled district — I think that upper district has only a few thousand people living there at present — I did not think it possible; I thought the large amount of interest we would have to pay on the structure, the large amount to build it, would pull down the rest of the corporation and swamp it; I did not think the lower lines could carry that great charge; I remember when I was first connected with the company that our line from Fifty-ninth street north up to One Hundred and Fifty-fifth street was such a burden on us that we held a meeting to consider whether we could not discontinue that and surrender it and take it down and get rid of it, but our counsel gave us an opinion at that time that we had to operate it to sustain our charter rights, and we did operate it and it is

self-sustaining now, but it came very near swamping the company; we had to advance year after year when interest time came around to meet the interest and prevent a foreclosure and a failure of the company; that was about 15 years ago, and I was afraid, in view of that, that a line up the Kings Bridge road would have the same effect.

- Q. You did not think the demand for it there was commensurate with the cost? A. No, sir, I did not; it would undoubtedly build up that section, but I was anxious to do it slowly and give the city a chance to grow up; I thought if we built to Fort Orange, which was also a sparsely settled district, but not to the extent of the other, and that if we built to the Fort and allowed it to enlarge, then we could extend up the Kings Bridge road if it was deemed desirable by the city officials or whoever had charge of the matter, the Rapid Transit Commission, or whatever body had charge of the matter, and I think I made that proposition to them to that effect, but they made it an absolute sina qui non that I build to Yonkers, and I could not do it, or to the city lines.
- Q. How soon can a person reach the Battery now by the use of your line your northerly, and is where; One Hundred and Ninety-seventh street? A. Yes; Tremont.
- Q. From One Hundred and Seventy-ninth street to the Battery?
 A. I do not remember the running time of our trains; I could furnish it to you.
 - Q. Do you remember that distance? A. No, I do not.

Mr. Davies.— Ten miles and a half.

- Q. What do you regard, Mr. Gould, as the best and most rapid transit system that can be had in the city of New York, and at the same time have something that is a feasible investment? A. I think an elevated road equipped with electricity is the best form of rapid transit for any city travel.
- Q. Do you not think it is feasible to operate your trains by electricity? A. I do; I think electricity is making such strides I have not thought so until recently, and I have been watching the matter very closely, but I think it has been brought to a point that is practicable; there is an elevated road equipped with elec-

tricity in Chicago that seems to work very nicely; it is better for the city, no smoke or cinders, the locomotive makes less noise, and it seems to me it is the best system.

- Q. And of course there can be no difficulty about the speed; you can get any speed with it that you want? A. Yes, I think you can get sufficient speed; we are watching the subject very closely, and my plan has been to try some experiments when I believed it had gotten to the right point; there are a great many different systems; handling the number of passengers we do I do not want to make any mistake; I want to buy the best I can to accommodate the public, and my idea was to first experiment on the Suburban road; I think a better system can be devised perhaps, than that now in operation in Chicago.
- Q. That is, by the use of the trolley wire? A. No; they have a rail at the side of the track, and it is the same system that was in operation at the World's Fair grounds, only it is amplified; it is improved over that system.
- Q. Of course, the circumstances are a little different? A. We carry over 500,000 people a day and average that, and they carry there but 16,000, and it is a great difference in the number one must transport, and I do not want to make any mistake and have the roads break down and those 500,000 people thrown on other means of transportation or have to walk.
- Q. Is it possible for you to have a third track from One Hundred and Seventh-ninth street to the Battery? A. I do not think it is, from One Hundred and Twenty-ninth street north, without reconstructing that structure; I think it is from One Hundred and Twenty-ninth street south; not quite to the Battery, but very nearly to it.
- Q. Can you lay three tracks around the curves? A. I think when we get into the narrow streets, I do not think we could lay three tracks; Chatham square would probably be the end where we would have to lay two tracks.
- Q. By the use of that third track as far as it could be laid, and then running express trains, would expedite the business from the upper end of the city? A. Very much; I think the express trains

work very satisfactorily on the west side from Fifty-fifth street down; I have heard no complaints about them, and a good deal of commendation.

- Q. The fare which you charge is the same? A. Yes.
- Q. An average fare of five cents? A. Yes, sir, the same fare on every part of the system.
- Q. How many trains do you run a day on the Ninth avenue; do you know? A. No, sir.
- Q. Do you have many complaints about the overcrowding of the trains? A. Yes; but that is almost inevitable; everybody wants to go north at night and south in the morning; if the number of people was spread evenly over the whole day there would be no crowding; the crowding occurs morning and afternoon.
- Q. Do you run more trains morning and afternoon? A. Yes; my recollection is on the Third avenue that carries the most people and most overcrowding occurs, we run on 50-second headway, that is, intervals of 50 seconds between; I do not think it is practical to run trains together closer than that.
- Q. Do you know, Mr. Gould, of the fact that there has been complaint made by the public of the method of lighting the trains? A. Yes; yes, I do.
- Q. You have what system? A. At present we are burning oil; I have been looking into that lighting question very carefully also, and you know I was on the point of adopting the Pinsch gas, but the improvements of electricity have been so great that I have gone over to that, and I believe electricity is the system for lighting our cars and stations; it gives less heat than the Pinsch gas, and is a nice clean light; if we adopt it on the road we will light our trains and our stations by electricity.
- Q. Did you say heat them? A. Light them; yes, there is a method of heating, I believe, which is successful.
- Q. But you could not adopt that unless you were using electricity as a motor power? A. No; there is another system of storage battery, but it is not so successful as taking it from a rail or from a trolley wire.

- Q. There is no storage battery in use that is considered practicable? A. There is none that is a perfect success; no, sir.
- Q. And particularly for operating an elevated road? A. No; they tried it on the Fourth Avenue surface road, an electric motor, and we have also experimented with it on our Ninth Avenue line some four years ago, the Daft motor, but it was not successful; the Daft battery, I believe was not a storage battery; the Fourth Avenue motors were; they have taken those off, I believe.
- Q. Does your company pay to the city anything as a compensation for their franchises? A. We pay a very heavy tax, about \$600,000 a year or a little over.
- Q. Before going to that, Mr. Gould, let me ask you if it is your present intention to change that lighting system you have to some other better system? A. Yes; I am investigating that now, and if we should adopt the electric-motor power I should like to light our cars with the same power—with the same light—the light derived from the power derived from the road.
- Q. You heat them now with steam? A. We heat them from the locomotives.
- Q. But you know some of the traction companies and street railway companies pay a percentage on the gross receipts annually for the use of the streets, and some a fixed sum annually for the use of the streets in addition to the ordinary taxation by the city; does your company pay anything of that character? A. Mr. Davies could give you all the particulars, or Mr. Gaynor; I disremember now exactly what.
- Mr. Davies.— Nothing but the old 5 per cent. income tax on the old New York Elevated roads; that you have, Mr. Wade.
 - A. Well, if you will put that down as my answer.
- Mr. Davies.—I do not know as your attention has been called to the matter that the New York Elevated railroad structure, being a very expensive structure, leads to a very large tax on the New York Elevated roads, which is entirely out of proportion to the surface roads; they pay a very small tax in comparison with the

elevated roads; all the surface roads have is a few ties and rails and rolling stock; their tax is very light in comparison.

By Mr. Nixon:

- Q. What is the proportion? A. I think we pay about \$600,000 a year tax, and I think that the largest that any street railway pay is not over \$4,000 or \$5,000; I looked it up at one time, but I do not carry the figures in my mind.
- Q. The Metropolitan people state they pay \$450,000 taxes of all kinds; that is, real estate and tax on the earnings, and all kinds?

Mr. Davies.— I have not the figures of their various taxes, but you take out the \$150,000, their percentage tax, and that leaves \$300,000 real estate and capital-stock tax; how many miles have they got?

Mr. Nixon.— I think 140 miles of single track.

Mr. Davies.—That is 50 per cent. more than ours in mileage, yet we pay a tax of \$700,000 a year.

Mr. Wade.— There is a great difference in the cost of construction.

Mr. Davies.— Consequently a great difference in the assessed values; we have only 33 miles of double track; you see this adtional trackage is made by taking into account the switches and sideage or third track; we get no great addition in carrying passengers; our third track only enables us to carry passengers quicker.

Mr. Nixon.— It does not increase your carrying facilities correspondingly?

Mr. Davies.— No, sir; as, for instance, a parallelism of our lines by having two sets of double track would be very much greater.

By Mr. Wade:

A. If you want the exact figures, we paid in taxes, \$657,379, we paid in 1894; Mr. Gaynor gave that; say \$595,000 for 1895.

Mr. Davies.— And \$95,000 to the State.

Q. Yes; \$595,243 and \$95,000 to the State? A. About \$96,000.

- Q. I just simply gave the round numbers; that is about \$690,000 total tax of 1895? A. There is one advantage the surface lines have over any elevated lines, and that is, they have to pay no land damages; they have to pay no right of way; the city grants them the right of way; we have had to pay a very large sum of money, and we do now.
- Q. I suppose the expense attending the acquiring of that right, and the litigations that follow it are enormous? A. They are over \$300,000 a year; and when the road was originally built and the capital originally raised for that it was supposed the city gave the right, as they do to the surface roads, to use the streets; that was afterwards denied by the courts.
- Q. It was not supposed there was any legal liabilities to pay damages to adjacent property owners? A. No; I said \$300,000 a year in legal expenses.
- Q. Now, Mr. Gould, I suppose you are aware of the fact that there is now throughout the State, and probably the entire country, much agitation and discussion upon the subject of granting rights to corporations to occupy public streets with railways, gas or water mains, or the like, and much inquiry as to the best methods for the city to dispose of those franchises where it does so at all; is that a subject that you have given much study and examination? A. No, only in a general way.
- Q. And connected with it is also this question of municipal ownership of surface street railways and elevated railways and the like? A. Yes, sir.
- Q. Is that a subject you have given much consideration? A. Well, I have thought about it a little; every good American citizen should.
- Q. I wish you would, Mr. Gould, tell us what you think, generally upon the subject of municipal ownership of street railways?

 A. I do not believe in it; I think it is not a proper thing for a government to take up; those things should be left to private capital; it is a move towards socialism, and I think it would be found in practice very disastrous; a government road is never as carefully run from a financial point of view, or from a public

point of view, for that matter, as a private corporation, and it has been tried in Europe, where they are used for military purposes, where it is necessary for a government like France or Germany, particularly, to have a method of massing its troops quickly to take the field against any neighbor with whom they may be hostile, but I do not think it turns out a success financially; most of the roads do not pay; the taxpayers have to put their hands into their pockets and pay the deficiency; and it is the same with the postal telegraph of England; it does not pay.

- Q. There is a yearly deficit? A. Yes, sir; so I am very much opposed to it; I am very much opposed to the government going into business enterprises; it should be left to private corporations and private capital to develop, and then whatever risks there are in business the private individuals are to meet it.
- Q. There is the feature that these are quasi-public corporations, and would you think it wise for the law to exercise pretty careful control over the means by which they are organized, capitalized and operated? A. Yes, I see no objection to that at all; I think just laws are good things for the public corporations.
- Q. Some people go so far as to contend that the books of your railroad should be public documents; I do not mean that anyone could come in off from the street and examine them, but any proper official should have the right at any time to examine them; I say your books; I mean the railroad books, and by that I mean any other company's books? A. The objection to that would be that there would be a continual different form of statements made; it would increase the work of the auditors of the different railways by 100 per cent. I should think, and the general results in every case I know of are public property; the surface roads have to file their different forms of statements with different commissioners, and the same with the elevated and surface roads.
- Q. Yes, and there is a class of people that came right in and claimed that the statements filed are not true; are made up; I do not see just how, myself, how that can be? A. I have never known of a railroad making a false statement of that kind.

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- Q. Could you conceive how one could begin that and prepare a set of books? A. They all have to be sworn to by the proper officers, and they are liable to perjury if they swear to what is not true.
- Q. Throughout the State there has been in the street railway system what seems to me to be an enormous form of watering stock; that is, there are many of these roads that the stock does not represent anything; that is, anything paid into the treasury of the company in money; now, do you think the statute ought to place some limit upon that business or exercise any control over it at all? A. I do not think it is possible to get capital to embark in an enterprise unless they think they see some return for it, and a law which would require, say, the investor should get but 6 per cent. on his money, unless the State would guarantee that 6 per cent., it would be impossible to raise capital for any new enterprise.
- Q. That is not just what I mean; but supposing the law should provide that when stock is issued or subscribed for, at least 50 per cent. of the amount should be paid into the treasury in cash? A. Well, personally I should see no objection to it.
- Q. You know it is quite common that we organize a railroad company and then a construction company and give the construction company the bonds and stock, which is practically ourselves, for constructing the road, and then we furnish the money and construct the road; and it quite frequently happens that the amount of bonds is more than the amount of money that they actually furnish under that system? A. Yes.
- Q. Do you think there ought to be some control over that in some respect? A. Yes; I see no objection to it myself.
- Q. You know if we should organize a railroad company to-day with \$100,000 capital we would have to consult no one in regard to that; but if we went to increase then we must get the consent of the Railroad Commissioners, but if we wanted to organize with \$100,000,000 to-day we would not have to consult anyone? A. I think it is rather unfortunate to have corporations water their

stock to the extent you outline; if you want to raise money for new enterprises you must hold out inducements to investors.

- Q. It has been very unfortunate with some of them; you have one in the city with \$1,200,000 capital which represents nothing, and it is worth 192 to-day, and I regard it as fortunate, that is, fortunate for the fellow that gets in; but this is a question that is sure to come up before the Legislature very soon, whether it goes there on the report of this committee or not; it is sure to be in the Legislature soon; shall the law permit a transportation company to issue its stock for practically nothing; and then comes another phase of it; is it practicable or feasible to require that every dollar of it shall be paid into the treasury in cash or property at its fair market value; and a very serious question? A. I think it is a very proper thing for State supervision of some kind,
 - Q. To exercise some control over it somewhere? A. Yes.
- Q. Then here is another question liable to come before the Legislature at a very early day; you have a right under the statute to-day to bond your road just as high as you want to, whereas you could not increase your capital stock without going to the Railroad Commissioners; now, should there be some control somewhere in the Railroad Commissioners, or in some other proper officials, where the power should exist to direct that you can not go above a certain amount in bonding your road or require the assent of a certain official or Board of Railroad Commissioners to the bonding of your road? A. Yes; I do not see any objection to that; I think it would have to be left open; some enterprises cost more than others.
- Q. You would have to leave some considerable discretion with wherever you left the power to direct in reference to it? A. Yes; in Texas they have a law that prohibits a railroad issuing bonds for more than it costs; it works very satisfactorily.
- Q. You could take most of ours A. There is an objection to it, and that is, it prevents the railroad company from issuing bonds for improvements, new locomotives or railroad tracks, or substituting stone ballast for earth on its track, and so forth, and they are things that should really be paid for by the issuing of new

bonds or new stock instead of charging it to operating expenses.

- Q. Is that a matter properly chargeable to construction account?

 A. Yes; you were speaking; if you will allow me to interrupt you—
- Q. Yes. A. About municipal ownership; you have not an example but something analogous in the Pacific railroads; the government in that case, instead of owning the roads as you suggested might be done, loaned its credit; well, that has operated out there very disastrously, not only for the government but for the railroads themselves; it is an example close at home.
- Q. There is a class of people that advocate this, that the city should build the road and then lease it to your company for a stated sum or a percentage of the receipts and so forth, for a short term at a time; others that advocate that the franchises should be granted to your company, but for a period not exceeding ten years at a time; well, you could not build an elevated road on a ten years' franchise? A. No; you could not; you could not raise the money for it; something like that is done in France, where the roads, as I remember the system, private companies furnish the capital to build the road, under an agreement with the government, by which, after a certain length of time, the road shall become government property; but then there is a stipulated agreement as to the rates of fare that shall be charged and no competing roads are to be built, and that amount of money so far repays the capitalists who have advanced their money to construct the line; but I believe that does not work very satisfactorily over there.
- Q. Don't you find this controlling perhaps not the controlling feature in foreign cities, but one of much influence, the subject of revenue; everyone is clamoring for revenue to the city or to the State or government to a greater extent than exists in this country? A. They have to have it to support their armies.
- Q. It is one of the subjects prominent in all European cities and on the continent, is it not? A. Yes.
- Q. Do you think it is good economy in our American cities, under our present conditions, for the law to make these transit companies the source of public revenue? A. Yes; I think they should pay a fair proportion to the city.

- Q. I believe they have gotten to paying here in New York as high as six or eight thousand per cent. of the gross receipts, but of course that has gone to the ridiculous; but here is one franchise sold at 38 and a fraction, under this Cantor act; now, that would bankrupt your company in a little while? A. Yes, sir.
- Q. As it will that company if it operates its own road and its own road only? A. It will; it is not possible to pay it.
- Q. Don't you think it would be better for the law to limit the amount to which you are entitled as dividends, that it should be a good fair return for the capital invested, and when it passed beyond that amount it should be kept down by a reduction of the fare rather than putting that excess into the city treasury? A. Well, I do not know which method; I have not given it that amount of study to determine on which method would be the best; we can not pay over 10 per cent.; I believe anything we pay over 10 per cent. one-half goes to the State or city, I have forgotten which.
- Q. Suppose you were earning 20 per cent. to day on your capital stock and 5 of it went to the city, who would pay it? A. It would be paid by the traveling public.
- Q. And a very large proportion of it comes out of a class of people that can ill-afford to pay it? A. Yes; I can not see that there would be any objection to making it apply in the reduction of fares except this, that we have a coin, a five-cent piece, which is very convenient for the public to handle, and 2 or 3 or 4 cents they have to carry pennies, which are very disagreeable, as they are small things and very heavy.
- Q. Yes; the 5-cent fare is more even change? A. Yes; and there would be a great delay in making change; that could be met, however, by selling tickets; so many tickets at a reduction, so the traveling public would carry the tickets instead of carrying the money.
 - Q. I think that is all. Recess until 2 p. m.

Thomas G. Shearman, called and sworn, testified:

By Mr. Wade:

- Q. Where do you reside? A. In Brooklyn.
- Q. What is your business? A. Lawyer.
- Q. How long have you been practicing in Brooklyn? A. I hardly ever practice in Brooklyn; I have practiced in New York city; although I live in Brooklyn, my office is in New York, and I have been practicing about 36 years.
- Q. Have you at any time been connected with either of the surface street railroads in either of the cities? A. Yes, sir.
- Q. Where and which city? A. With the Crosstown railroad in this city is the only one; as counsel.
 - Q. Crosstown? A. Yes, sir.
- Q. Now, Mr. Shearman, if there is anything you have in mind that you wish to suggest to the committee, go on in your way? A. I should liked to have been in a position, but I was invited to come before the committee of course, I could not say anything whatever with reference to the corporation for which I am counsel, nor give any information which I have learned as such counsel, but if there is any other line of inquiry you wish to make? I do not care to volunteer anything.

By Mr. Nixon:

Q. This Tax Reform Association, 151 Broadway, they seem to look on you as a man who thoroughly understands their ideas on matters of this kind, and it was that association that suggested to us that we have you come here, and that your views met their approval, and they thought it was for the benefit of the public to have your views stated at a public investigation; they were here yesterday, several of them, and we allowed them to go on and state their views of municipal control and so forth, bearing on any of those questions? A. I feel perfectly free to speak on the subject of taxation and railroad questions in general; the reason that I hesitated was that I rather thought it was implied that I give specific information about specific railroads.

Q. No; our idea was for you to come here and express yourself in a general way and give us your logic? A. With regard to street railroads generally, I saw the first street railroad, and traveled on the first street railroad which I think was ever built, the Sixth and Eighth avenue roads, and I have watched with considerable interest since that time, 1851, the general course of the street railroads, and I have no objection to giving my general views as formed at that time, and up to a point which will keep entirely without the period which might affect any corporation for which I have ever been counsel; at that period I shall ask to stop.

By Mr. Wade:

- Q. Are you willing to express your views on the subject of municipal ownership of street railways? A. Yes.
- Q. Please do that. A. I believe that eventually these street railroads ought to be owned by the cities; I should not be in favor of an immediate transfer of these railways to the cities, not because of any tenderness of any corporation, but on the contrary, my impression is that in the present stage of information and present stage of public feeling, if an attempt was made to transfer these railways to municipal ownership and carry it through promptly, the cities would make a very bad bargain; I think in the course of time when public attention has been sufficiently drawn, I think it can be introduced with great advantage to the cities and with fairness to everyone concerned; for the present, for immediate action, my judgment is that the best thing that the Legislature could do in the interests of the cities in the State would be in the first place to regulate the future sale of franchises on a different principle from that which now exists; I think all these franchises ought to be sold to the highest bidder, under careful restrictions, but only for a limited term; I do not believe that that term is at all likely to be made too short; I do not believe that you will get any lower bids for a term of 10 years than you would for a term of 30 years, relatively speaking, provided, you adopt the principle that has always been adopted by New York to the ferries; that at the end of the term

the next bidder takes the next bargain, subject to paying to the railroad company the full value of all its property it used in its business; on those terms I believe you could obtain for railroad franchises just as good bids as New York gets for its ferries, and under such arrangements, I think a large revenue could be raised for the city, precisely as for the ferries and docks; I believe under those arrangements it could be adopted.

- Q. When you speak of paying the fair value of the property, do you mean the fair value at the time the new company acquired it at the expiration of the lease? A. Yes.
- Q. What it is then worth? A. Yes; not what it cost; that would almost inevitably be a good deal less; the railroad company would suffer no injury because the appraisers would put a liberal price upon it.
- Q. The advantage would not be to the corporation going out awarding anything for the franchise? A. No; I would not award a penny for the franchise to the corporation going out.
- Q. Take it right there in that conection; suposing the time was limited to 10 years, and that lease had been made in 1885, do you think it would be fair to take away the property of an electric road to day, at the end of 1895, that was electrified in 1890 or 1891 at its fair value the 1st of January, 1896? A. They would have the same yes, subject to the conditions that I have stated.
- Q. You know in electric roads the development in the last five years has cost these railroads numberless thousands of dollars? A. Yes.
- Q. To illustrate; they commenced equipping their cars with motors that cost \$5,000 each; in the very first stages of propelling cars by electricity the motor cost \$5,000 then, and to-day the thing is not worth \$25; now, would it be fair, if that system was enforced, would you not retard and possibly prevent the improved methods? A. That is, of course, a very strong and excellent illustration.
 - Q. Take it in your own city; they have in the power-house of the Brooklyn City, a generator the company paid \$45,000 in cash for, and the same generator can be produced to-day not above \$28,000?

- A. I was not aware of these particular facts, but that part is in harmony with my general knowledge of locomotives and cars and so forth.
- Q. If you made the terms short do you think the tendency would be to abridge or stop the adoption of new and improved methods? A. I think not, for this reason; a company under the present system has every inducement to go on using these old things as long as they will answer the purpose, and they often do use old machinery and old cars; that I freuently see, and obsolete instruments for a long time, because they do not like to incur the expense of putting them in, and do not think the immediate revenue will compensate.
- Q. Is not that true of a very small percentage of street railway companies in the State of New York? A. To that I would have to make a qualified answer; it was true of a very large proportion a little while ago; I think it is true of a small number now; the march of improvement has gone on at a tremendous pace.
- Q. You know it is a common experience of people who have been electrifying these roads that the expenditures were way beyond anything contemplated when it was undertaken; for instance, you take a horse-car line, and they commenced electrifying that road, and one of the first things they are met with is absolute construction throughout? A. Yes, sir.
- Q. It has occurred in many, many cities of the State, the old roads practically worthless; now, what company would do that with a thing staring them in the face that its property was to be appraised by a disinterested appraiser in two or three or five years, and taken away from them? A. I think the answer to that is contained in your valuable suggestion; we will suppose it to be the case of a railroad having been bid in for five years; I will take a case for one year, if you prefer?
- Q. You could not sell a franchise for one year? A. No; five years you could not really tell, but I am willing to take five; I am willing to take that their extreme case; ten years would be my minimum idea, but I suppose it was for five years; these improvements were gotten in; suppose new machinery was invented

in the fifth year of the company; now, if the company were going to be deprived of everything they would do as a man does — build a house on leased ground; build the poorest they could, but if this company was to be paid the full appraised value of its property they would have actually inducements to put in new machinery in the fifth year, because then the parties who bid against them would have to pay the value of that new machinery.

Q. It goes to the second company as second-hand machinery? A. Not at all; that is not a fair way of appraising it; all these things are to be done on a basis of justness and fairness, and according to my observation the danger always is that these properties are always appraised too high, rather than too low; take the ferry companies, and I never heard of the slightest complaint that the property was taken at too low a value.

Q. That is not quite a parallel case. A. Not entirely; but steamboats run down.

Q. But the method of propelling these ferries is quite similar to what it has been for a great many years? A. That is true; but now take the actual cost of the electrical companies, it undoubtedly presents greater difficulties than the others because the progress of invention has been more rapid; they could, within the last three years, or three months, put in bona fide improvements required for carrying on the traffic and they would get the full value of those, and any one who bid against them would have to pay for those, and the value would fairly be the cost, where a new corporation bidding for the franchise might have different ideas and would not like to take these and would be placed at a very great disadvantage.

Q. Then you would limit its disposition to bidding upon the right, if you had that condition? A. I agree with you; I am more afraid the bids would not be liberal than that they would be too low.

Q. Then the scheme would not work as well for the revenue of the city? A. I am not sure of that; it would not produce as much immediate revenue if the new company bid new, but you

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would get the real bona fide franchise for the franchise through a term of years; you do not get that now.

- Q. They sold one the other day for 6,000 or 7,000 per cent. of the gross receipts. A. Yes; but it will never get it.
- Q. They sold one for 38 per cent. again. A. You will see before that is worked out that influences will be brought to bear to relieve them from the burdensome nature of that obligation exactly as happened in Brooklyn.
 - Q. The people are responsible for that? A. The people?
- Q. Yes. A. Unfortunately the people have not placed in there the best man to serve them — to employ the best man to serve them; I can illustrate as to the effect of these high bids that look very plausible for the benefit of the people; in the foundation of Brooklyn railroads in 1853, after the Sixth and Eighth Avenue had become a success in New York, there was what has since become remarkable, an honest common council; Edward Corning and Edward W. Lambert were members; they put up franchises, not to the highest bidder, but to the lowest; that is, the one who would agree to carry the lowest; I think five of those roads, Fulton Avenue, Myrtle Avenue and Grove Street roads, I think were considered to be the best; there were various bids; nearly everyone agreed to carry passengers at 5 cents, but certain parties put in a bid for those three and two other roads at 4 cents, and, of course, they got the franchises; before they ever built a road they applied to the common council, representing they were very poor and the business was poor, and they could not get along, and asked leave to charge 5 cents for, I think, five years; they got that from the common council, but on the condition that after the five years they should sell twenty-five tickets for a dollar, and on all the lines of the system; I am of the impression that that was afterwards made six tickets for a quarter, but I know they were to sell tickets at 4 cents each; I used to buy those tickets for a quarter myself; that applied to all of the lines instead of these four or five; but after a while, the railroad companies, finding a different common council in existence, applied to the common council to be relieved of this burden; they could not get it at first,

and they went to the Legislature and they smuggled through a bill which no one claimed to understand, that allowed them to charge 5 cents for each fare; they acted under that for two or three years until a contest was threatened, then they got the consent of the common council to charge 5 cents and not 6 cents; they managed one way and another to keep the privilege of selling tickets on all the lines for 5 cents; that has been worth, on an average, the difference between what they agreed to charge and have charged, has been worth \$300,000 or \$400,000 to the Brooklyn City Railroad Company; it is worth a good deal now; I reckoned it up last year and found they were making \$900,000 a year; that is an illustration I can give without relying on anything at all I have received in confidence, in the way in which all railroads manipulate these affairs; now, when you get these extravagant bids it means the company will not build the road or operate it advantageously until they get some relief from it; a fair bid is much better.

- Q. Do you think it proves the so-called Cantor act, impracticable? A. Well, yes; I think it is, nearly, in some particulars; not altogether; but I do not think it is likely to work well; there will be no difficultles of that kind with ferry companies so far as I am aware; certainly not with the leading ferry companies; they have paid what they agreed to; they have been sometimes much too liberal to deal with; not of late, but formerly they were.
- Q. If you can not approach municipal ownership you spoke something about the system of taxation which you said you would feel willing to express your views on? A. Certainly.
 - Q. And if you will, so far as it pertains to railroads? A. Yes.
- Q. This committee is not investigating the subject of taxation generally. A. Of course, the taxation of railroads is only a branch of the general subject; I shall not go into the general subject any further than just to indicate how they are all connected together, and that one single general principle applied to all taxation would really hit the case of railroads; there has been a great deal done in various States in the way of exceptionally particular taxation of railroads, some putting excessive burdens on them;

I think rather more relieving them from shares of burdens they ought to bear, but it is pretty difficult to say which side the principle has been; it is certain some railroads in some States are very heavily and unjustly taxed; the difficulty about taxing the railroad really lies in what I consider the fundamental error of undertaking to tax everything; I believe it to be injurious to the State and to the interests of the people that the whole property of a railroad should be heavily taxed; you tax them under the general system for all their improvements; take an electric company, if it puts in an entirely new system and if the appraisers are very honest and very stringent, they immediately proceed to put a heavy tax which, in the city of Brooklyn, would amount to 23. per cent. on the improvements put in; there can not be a more discouraging system devised to improvements; of course, the railroad companies are not taxed as much as that, and the reason they are not is because they use influence to prevent it; in the first place, railroads ought not to be taxed by local authorities; taxes, I am speaking of now, not sale of franchises; taxation ought to be conducted by the State, and if the local authorities are to receive a portion of the taxes, I think they should receive it through the State; this does not apply so strictly to street railways; it does not apply with any particular emphasis to them; but our street railroads are becoming connected with more distinct lines; but with regard to railroads generally, the Connecticut system is better than New York; under that system railroads are subject to no local taxes, but the State assesses them; and take the companies of the New York, New Haven and Hartford Railroad, which runs partly through New York, Connecticut and Massachusetts; the value of the whole line is ascertained and a pro rata on that portion in Connecticut; it is imposedvery fairly and easily ascertained, and the tax imposed on it is moderate; they tax it only 1 per cent., whereas most property is taxed in Connecticut 2 per cent. and even more; but after all the railroads are paying their fair proportion, because everyone knows that no property can stand 2½ per cent. or even 2 per cent. taxation long; in the State of New York, if railroads were taxed

exclusively by the State under a general system, and local assessors left no discretion whatever, you would get a much better and more effective and better system of taxation; but in the second place, my judgment about railroads, as about all similar property, is, that the State should impose a tax really only on the franchise; that is to say, using franchise in a large sense, the privilege of using a certain valuable piece of ground; in my judgment, the franchise of a railroad consists entirely of a ground rent; take these street railways in New York, what really constitutes the value of a railway here; I do not suppose there is a single street railway here whose stock does not represent the value of the privilege of running over that street; I do not know it if there is; I do not mean to say that the stockholders have not paid in money for their franchises, but they have paid that as far as I know, to people who have got this privilege; they may now be using stock as a means for making their improvements, but I have never met any.

- Q. They claim there is no water in the Third Avenue line, not a dollar? A. It was all water originally; but the people who have come in lately have paid for that water; the Third Avenue had the most valuable grant in the city.
- Q. That does not follow the stock was water? A. The original franchise that was sold to the original stockholders was all in this privilege; I understand they claim to have paid in in cash \$6,000,000; who got that \$6,000,000; why, the owners of the franchise; the company must have paid most of that out or all of it out, but I know that franchise is worth millions of dollars and could have been sold and unquestionably was sold to the company for that; now, under our system of taxation we are so anxious to hunt up all manner of other property, to hunt improvements and tax men on their improvements, that we practically ignore these enormous privileges which are given to people for nothing, and which are perfectly fair subjects of taxation; I would not take anything back that has been given to them; I would let them pay a fair taxation on those privileges; that on one hand would relieve the street railroad companies from their taxation and on their im-

provements, and stimulate them to improve, and give to the State of New York a much greater revenue.

- Q. In Connecticut do they tax the individual stockholder for his capital stock? A. No, I understand not; they tax the corporation itself.
- Q. That is, simply the naked value of its roadbed and proportionate amount of rolling stock? A. I am not commending the whole of their system because they undertake to tax everything a railroad has; they ascertain the aggregate value of all of its stock and bonds; that they assume to be the value of the property; from that they take its bona fide debts; perhaps the bonds come back; perhaps not; they ascertain in that way, and they can ascertain with wonderful accuracy the real value of the property; then they reduce it to the number of miles and they multiply it by the rate; they have a wonderfully fair system of ascertaining the value of the system in Connecticut; some allowance is made for the terminals.
- Q. Speaking of the exemption to local taxation; that only applies in Connecticut to property owned and applied by the railroad company for railroad purposes? A. Yes.
- Q. If they had other property; for instance, real estate, that they contemplate at some time to use for railroad purposes, but for the present using it for some other purpose or renting it, that is subject to local taxation in Connecticut, is it not? A. I think that is so.
- Q. That is so in Pennsylvania, is it not? A. Yes; they have a pretty good system in Pennsylvania, I think that is patterned after the State of Connecticut; either of those is a very much better system than in our State.
- Q. Do you think the taxes paid by a railroad company in Pennsylvania are as high as those paid by companies in the State of New York upon the same amount of property? A. I have not analyzed that sufficiently to say; I have had those figures but have not looked into it; with regard to street railways, as long as this general system is not adopted, the system which I think would be right would be to tax them upon the value of their

franchises; that is the privilege of operating the particular streets which they do operate, and to exempt their other property; I believe in doing that you would make a distribution of taxation among them which is fairer than the one in existence, and I think you would produce a good deal more revenue to the city.

- Q. Now, let us see; run through the State, and I will take for instance, the New York Central road; it runs through various towns and cities of the State; and in the cities the average taxation upon its assessed valuation is from 2 to 4 per cent.? A. Yes.
- Q. Probably 2 per cent. the minimum? A. Yes, I should think it would be.
- Q. And a little above four, perhaps, in some places; in addition to that they are subjected to their capital stock tax to the State, and the tax on their grosss earnings, and then they are taxed by the Railroad Commissioners to maintain that department of the State government? A. Do you want to know how much it amounts to all together?
- Q. It would amount to more than 1 per cent., would it not, upon the cash cost of the road? A. Cash cost, very likely; but it would not amount, I should think, I do not believe it would amount to as much as 1 per cent. on the total price of all its property; I have not figured it up.
- Q. You mean the fair value? A. Yes; taking the market rates; that is the way they do in Connecticut, taking the actual market rate of stock and bonds, and they find how much has been invested in the property.
- Q. They assume that has all been invested? A. The company, I believe, is at liberty to show it, has it not; but from the valuation I have seen that they make, I should say the company did not succeed in doing anything of the kind, and that is all taxed.
- Q. In Pennsylvania do they tax the stock to the individual holder or owner as personal property? A. I thought not, but I am not certain about Pennsylvania; in Connecticut they do not tax the stock; this 1 per cent. ends the tax; they make no contract to not tax more than 1 per cent., but that is what they actually do.
 - Q. You take a street railroad, in addition to all this, and they

are subjected to a tax which involves the maintenance and repair of from one-third to one-half of the street through which they run? A. Well, of course, if a new system of taxation were adopted, the whole of that question must be considered, and we could not lay down an arbitrary rule that they must, in addition to the tax on their franchises, pay the whole tax for these repairs, although it would be proper that they should pay for the repairs that form that part of the street, the precise part which they run over with their cars, the repairs between the tracks; that would not make much difference if they did not pay; the franchise would be worth so much more; if they did it would be worth so much less.

- Q. The franchises only to be determined by the value of the use of the road? A. Certainly; that is all the line is worth anyway, what you have an opportunity to make out of it; all these great corporate franchises like railroads and telegraph, they are really as much a ground value as the value of any land under any house; that is all there is of the franchise; it is the value of using that land to the exclusion of other people.
- Q. You would prefer that system to a system which would exercise some control over the roads, and at all times know the actual money invested in it, and the actual money invested, and the earnings and when it passed beyond a fair return for the capital invested of reducing the fares and keeping it there? A. I think I should for two reasons; in the first place, these investigations into the cost are never satisfactory or successful; experience shows it is impossible to do justice to both the people and the companies; the calculation is out of the way one way or the other; in 99 cases out of 100, the injustice is done to the people; if injustice is done to the corporation they have no difficulty in showing it; they can make such a showing as to shock the moral feeling of the people themselves; the people never want to rob corporations; on the other hand, the people fail to get the facts in most cases, and the result is the people do not get enough; they do not get enough reduction of fare and enough allowance any way; on the other hand, why should not the people who want to travel or use the franchise

in any way, why should not they pay the fair market price for it; there is no reason why they should not; the only reason I am in favor of reducing fares and keeping charges down as much as possible is that all schemes for taxation, so far as have done injustice to the people, and we must get relief in the way of better reduction; take the case of Brooklyn, where, as I have said, the people are entitled to ride for 4 cents; I am not in favor of having the companies come down to 4 cents; I am not in favor of bringing the fare down, but I am in favor that the people of Brooklyn should get some of that difference between 4 and 5 cents; at present they give to the corporations, and the corporations ought to be required to pay over to the city.

- Q. Supposing you had a fare of 5 cents and 1 cent of it go to the city? A. In the city of Brooklyn that would be a fair and proper arrangement, and would be in harmony with the original contract.
- Q. That would be relieving the wealth of the city from taxation as far as you could reasonably go, and imposing it on the poorer classes? A. The poor people pay it now and they pay it to the corporation, and have for forty years.
- Q. Then reduce the fares? A. Of course, really these fares are —I was taking the case as an abstract question; really, as a point of fact, I do not see why tickets should not be sold six for a quarter in both of these cities; in Washington they always get six tickets for a quarter; in New York and Brooklyn where business is far larger and profits immensely greater you can not do it; I was not seeking to inquire exactly —
- Q. Do you think the people are entitled to any sympathy because the common council that they have elected make a corrupt bargain with railroad officials? A. Well, yes; they are entitled to the sympathy we extend everywhere to ignorance and narrow-mindedness.
- Q. If Tammany Hall was as bad as its worst enemy every painted it, the people of New York city are entitled to sympathy becaue of its control when it is kept there year after year by the deliberate action of the people? A. What are the people to do.

- Q. I do not know. A. They are robbed on both sides and cheated on both sides.
 - Q. Are they? A. Yes.
- Q. You and I are not apt to go and vote for anyone we do not want to? A. No.
- Q. Take the great mass of people in the city of New York, they are honest and intelligent? A. Well, they are not very intelligent.
- Q. Just so in all the rest of the cities, perhaps, to a greater or less extent? A. There is more honesty than there is intelligence; the intelligence is limited; one can only feel the kind of sympathy that he feels for foolish people.
- Q. That he feels for himself when he goes and does what he knows at the time he was doing he ought not? A. That is so; the fault really lies with the indisposition of the more educated and more respectable part of the community to educate the mass of the people; I do not mean to educate them in schools, for they are willing to do that, but to educate them in public affairs.
- Q. Or to get out themselves and take an interest in public affairs? A. Yes; not that I believe in primaries, and I learned the only result of that after a tremenduous struggle; the result was, all the worst rogues all floated over to us and reported at the next election how they cheated the other side; I have lost my faith in primaries largely; the respectable people, if they would drop public affairs, could easily gain control over the mass of the people and conduct affairs.
- Q. In New York city or elsewhere? A. Yes; as long as they divide on other things, and the free trader will not vote for the protectionist or vice versa, in municipal affairs, what can one expect.
- Q. Then the world should sit down and sympathize with those people who will not protect themselves when they know how to do it and do not do it? A. I am not sorry for the highly respectable educated classes, but I feel a very great deal of sympathy for what I call the ignorant, sometimes called the lower classes, those that do not know and would like to know, but have no means of knowing how they ought to vote or what they ought to do.

Q. Why not extend your system a little further and advocate a system that will give them an opportunity to go to and from their work at the lowest possible rate of fare? A. I am emphatically in favor of that under our present conditions, because that is about the best thing that can be done; but if you asked me whether that is going to be such a great relief to them as a great many good people anticipate, I say no; that their rents will raise in a very few years to correspond with all the advantage they gain in reduction of the fare; but it will be this difference, that you will spread the people over a larger area and give them better air.

Isaac Niner, called and sworn, testified:

By Mr. Wade:

- Q. You reside in the city? A. Yes, sir; 715 Tenth avenue, in the city of New York, between Forty-eight and Forty-ninth streets; my business is in the hat business.
- Q. State what you desire? A. Regarding the belt line railroad —
- Q. What company is that? A. It is controlled by the Metropolitan Traction Company; I have been residing in that neighborhood the past forty years, and during all that time the residents of the west side have been compelled to pay to the Belt Railroad what we term to be an exorbitant rate of fare for travel on their cars; about two years ago the Metropolitan Traction Company, if I am not incorrect in my statement, obtained control of the Belt Railroad; the residents thought they were going to obtain some relief from this action, but to no purpose; there was no relief, and I will now explain the cause of my complaint; it is this: For instance, where I reside between Forty-eighth and Forty-ninth streets, if I get into the car I must pay my fare; on arriving at Fifty-third street at the depot the conductor will give to me a transfer which permits me to enter a car going up town and going around Fiftyninth street that will permit me to ride until I arrive at Fifth avenue, and if I desire to ride any further I must pay an additional 5 cents, and I consider that —

- Q. Just repeat that; I may not fully understand. A. I will repeat it again; of course, a person getting on at the Battery, for instance, can have the same privileges as I should have, residing between Forty-eighth and Forty-ninth streets; that is not denied; but I am of the opinion that the residents of the west side up town should have the same benefits as those that get on at the Battery; in these days when fares and railroads are very cheap, and I may include the New York Elevated Railroad, so you can ride right around the city for one fare in their cars, now by transferring out South ferry; I think that the Metropolitan Traction Company should give the people in return for the valuable franchises which they have received, something of the benefit in the way of a reduction of a fare, or in the way of a transfer around the city; the belt line controlled by them extends up to Fifty-ninth street, and then going down goes down First avenue, making a circle of the city down to the Battery again, and a person in my block getting on to the cars and paying a 5-cent fare can ride no further than Fifth avenue, the moment he gets to Fifth avenue the conductor demands extra fare or puts him off the car.
- Q. That is the end of the trip? A. That is, according to the company; the question is I am glad the committee are in the city of New York, because I have never arrived at the conclusion why Fifth avenue is the end of their road.
- Q. As to why it is? A. Yes; if a person gets off at Fifth avenue and desires to ride around the west side, the conductor will give you a transfer ticket to ride below the depot on Tenth avenue, and down to the battery if desired, but if you get on 10 yards away from Fifth avenue the conductor absolutely refuses to give you a transfer to ride below the depot, which is on Fifty-third street and Fifth avenue.
- Q. Because they contend that is the end of their line? A. I suppose so.
- Q. The starting point, in other words? A. They have two starting points; the depot at the west side is the starting point, and yet they permit you to ride to Fifth avenue and then put you off if you do not pay another fare.

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Q. That is not the end of their circle? A. That is why I want to know why it is so.

- Q. If they had a point somewhere in their line where the right to ride on one fare should cease, so that you could not ride in a circle all day long, that point would have to be definite and fixed; what I am getting at is, you would find that same condition whereever the point was, if not you, someone else? A. I think, Senator, that a passenger should be permitted to ride as far as he chose on that line; the line is no longer comparatively than any other of the existing lines in New York city to the park and a few crosstown roads.
 - Q. Do they go down one side and up the other? A. Yes.
- Q. Would you let a passenger go more than once around? A. No.
- Q. Where would be the stopping point? A. I think if a passenger got on anywhere on the west side and desired to ride clear around to First avenue and down to South ferry again, he should.
- Q. You would have the starting point at South ferry? A. Yes; as far as the ferry was concerned.
- Q. Then a fellow 10 rods east of South ferry that wanted to go on the west side, he would have to pay another fare if he passed that point? A. I think if a passenger got on anywhere on the west side and desired to ride clear around to First avenue and down to South ferry again he should.
- Q. You would have the starting point at South ferry? A. Yes; as far as the ferry was concerned.
- Q. Then a fellow 10 rods east of South ferry that wanted to go on the west side, he would have to pay another fare if he passed that point? A. If he is 10 rods?
- Q. Well, 10 blocks? A. Ten blocks and desiring to go on the west side?
- Q. Yes; he desires to go around the battery? A. He should have the privilege of going up on the west side.
 - Q. Then you have no starting point? A. It is a circle.
- Q. You appreciate the fact the conductor can not tell, where a hundred passengers get on? A. Even if there were no starting

point, it would not reflect to the injury of the company; let me understand this; this, by way of example, if a passenger gets on the elevated railroad and in a station going down town when he gets to South ferry he is permitted to transfer to any line to the east side, and if the east side, vice versa.

- Q. Supposing I get on the elevated road at One Hundred and Seventy-eighth street and pay a fare going up? A. Yes, sir.
 - Q. When I get to the end of the line I get off? A. Yes.
- Q. If I want to come back I pay another fare? A. Yes; that is the end of the line.

By Mr. Gleason:

- Q. Supposing you lived at Seventy-seventh and Ninth avenue, and you wanted to go to Lexington avenue and Forty-eighth, and you wanted to go on the car; you run on Ninth avenue and Lexington, the Metropolitan; when you get to Fifty-ninth street you pay 5 cents more, and when you get to Lexington avenue you pay 5 cents more? A. Because you ride on different lines.
- Q. Don't you think that should be remedied? A. I do not see how you can remedy it where one company is not connected with the other, but if these different lines were controlled by one company I think they could afford to transfer their passengers to all existing lines.
- Q. Don't you think the city that grants the franchise should. make them transfer from one to the other? A. That is a question I do not care to go into; if you understand me rightly, being a resident of the west side forty years, this matter I came expressly to complain of has been so flagrant to my mind.

By Mr. Wade:

- Q. It costs you two fares to get to the other side? A. Yes; it seems to me an injustice; the main body of the people riding on the cars are poor people; still, if they were not, it is an injustice; but those poor people riding on the cars can ill afford to pay the 10 cents.
- Q. The bulk of the traffic is up and down? A. Yes, sir; I can not say that the bulk of it is up and down for the simple reason

that the Belt railroad, in addition to their Belt line, has what is termed connected with that, a crosstown line, cars that are painted red instead of yellow; they leave the depot at Fifty-third street and they will carry a passenger from the depot and carry him only to Fifty-ninth street and First avenue, and then if he desires to go down town he must pay an additional fare.

- Q. Simply because he has taken a down-town car? A. Yes, sir.
- Q. And ridden past the starting point? A. Yes.
- Q. How could you correct that evil? A. That could be corrected.
- Q. I wish you would tell me how you would operate that Belt line without having some point from which you collected fares? A. The cars naturally leave the depot at intervals of so many minutes or one-half minutes; they leave the depot on Fifty-third going down town on the west side and going up town also to cross Fifty-ninth street and down town on the east side.
 - Q. Would you make that the starting point? A. Yes.
- Q. Then men riding beyond that point would be subject to two fares? A. No, sir; I do not agree with you, for the simple reason a passenger getting on below the depot a few blocks would be subjected to paying another fare, as I am now, when I get to Fifth avenue; that is what I seek to remedy through your committee.
- Q. Tell us how to do it? A. I suggest the company change their tactics entirely; it is this; by permitting a passenger to ride as far as he desires; it will not be so great a thing.
- Q. To ride as long as he wishes? A. Yes; the people of New York city have their business to look after and very few of them care to ride for hours on cars; I have heard that subject discussed by my neighbor and residents in the neighborhood.
- Q. You put it on the theory that a person gets on a street car, they get on the car for the purpose of going to a definite point? A. Just where he has to go to and gets off when he gets there.
- Q. If he did see fit to go on a car he should have that privilege for 5 cents? A. Let him ride there; but there is no one in 10,000 that will do it; he will get pretty well tired of traveling on that Belt Railroad; where it works injustice and hardship to

the company, the men will never do it again; at the present time, the way matters exist on the Belt Railroad, many improvements can be made redounding to the benefit of the public, and I am certainly somewhat grieved as an individual and citizen that improvements of some kind have not been made.

By Mr. Foley:

- Q. Is not the Belt road now, or rather the Metropolitan securing consents for changing the motive power? A. I presume they are.
- Q. They do intend changing to the cable system? A. Either cable or underground trolley; some other system.
- Q. They have received consents, I know? A. Yes; but that does not go to show they are going to permit the passengers to ride beyond Fifth avenue.

By Mr. Wade:

- Q. You see your complaint strikes a subject that is not easily disposed of? A. I am aware of that, but it should be taken up.
- Q. As an abstract proposition, the idea that a person should be permitted to get on to a street car and ride as long as he saw fit is extremely ridiculous; you will agree to that? A. From what standpoint?
- Q. From anyone's standpoint, if he actually did it? A. But I ask you how many residents of the city would do that?
- Q. You are undoubtedly quite right about that? A. No one would do it.
- Q. Your experience with the road is that you are sufficiently well pleased with your ride when you get to the end and you get off? A. Most assuredly, sir; very glad to get off.

By Mr. Gleason:

- Q. Supposing you got on a blue car up Masten avenue and you go to One Hundred and Forty-second street? A. Could you transfer up or down town?
- Q. The blue cars? A. Yes; you can go up and down Second avenue; with reference to the blue cars, if I get on a blue car going down Tenth avenue, down to Forty-second street, across Forty-

second to Second avenue, I transfer free up or down Second avenue; should I desire to transfer at One Hundred and Tenth, I am at liberty to ride to One Hundred and Tenth, and go to the ferry on that side; and when I think of the companies that give long rides to the people for 5 cents—the very traction company of which I complain will give you a ride from South ferry up Broadway or up Lexington to the Harlem river, or the other way up Columbia avenue to the other end of the island; to think that the same railroad will charge a passenger for riding 15 minutes, 10 cents, is outrageous, and something should be done to remedy this injustice.

By Mr. Wade:

Q. The difference only arises from the fact they have a point at which the circle is completed? A. It would be a very difficult matter to decide where should be a starting point for a belt railroad.

By Mr. Nixon:

Q. It is very hard to determine where a circle begins? A. Very hard; in order to remedy that, and taking into consideration that the belt railroad does not encircle the city at present, it may have one so in former years; as the city exists to-day it is merely the extreme lower part of the city; I think that the company should give the people opportunity to ride as far as they desire, east or west.

By Mr. Gleason:

Q. You would have them transfer on every line of cars they control? A. I think so; the Belt Railroad crosses Fifty-ninth street; in crossing, you now cross Ninth avenue, the line they control; they cross their own cable going up town — the Eighth Avenue — as I understand they already, or very shortly will control that road; did I mention the Sixth Avenue; I think I did; that is all; I think it possible they should transfer their passengers from the Belt to these lines, and vice versa; I think they stand in

their own light; I think they would reap the benefit of a different policy.

By Mr. Wade:

- Q. Do you know how many transfers that company put out in a day? A. I do not; I can say this, there are very many transfers issued, as I ride very often on those cars.
- Q. Upwards of 80,000 a day, they state? A. I presume that is fully up to the mark, or not more.
- Q. Have you been to the company? A. I have not, sir; I never went to the company; I have consulted —
- Q. Why do you not see Mr. Vreeland about that? A. I will tell you; some time ago I thought of going to see Mr. Vreeland; I then thought, what would be the use; he would usher me into his office and hear my complaint, and that would be the end of it; the corporation stands supreme, and the poor person, paying the car fare, is no one; that would be the end of it; naturally we let the matter to to sleep, because there was no one to take up the cudgel; when I heard your committee was coming to New York city, it then occurred to me it was my duty as a citizen to come and make my statement, and explain to you some things that might not perhaps be known to you; these are little things, to be true.
- Q. It is not a little thing to a person using the Crosstown every day? A. The people of New York, as a rule, will stand a great deal and suffer and say nothing; and so they do.
- Q. Yes; I have heard of it? A. They suffer, but now is the time; I think that the Legislature that will be in session in January ought to be able to do something in order to remedy the evil as at present existing.

Roscellus S. Guernsey, called and sworn, testified.

By Mr. Wade:

The assessment and taxation of corporations is the principal subject I wish to speak of; Mr. Shearman has spoken of the franchises of the Fulton Ferry Company; I have had occasion, within the past six weeks, to look at the terms of the contract with the city and the Fulton Ferry Company; the terms of the lease are for six years; it was put up at a certain sum; they are to keep the ferry in repair, and keep it in perfect running order, and it is specified they are to pay so much on the gross earnings during the period of six years; it expires in 1901; at that time it is put up again to the highest bidder, and they are to be paid for whatever they have on hand.

By Mr. Nixon:

- Q. Who lets the contracts on the part of the city? A. The city comptroller; he advertises and gets these bids that were sold; I think it was last June it was sold for six years; it includes all the ferries on the Brooklyn side between here and Brooklyn, and the city, under that, receives a very fine income.
- Q. What is the percentage they receive; do you know? scarcely remember; I would not undertake to say, but it is so much on the gross receipts, and they have to pay the taxes on their property the same as other corporations; in regard to the taxation of corporations, that Mr. Shearman testified as to the plan in Connecticut; in Massachusetts it is the same plan, and Maryland and in the State of Pennsylvania, and in all those States a resident owner of the stock is taxed on his stock; but in the State of Connecticut I do not know, but in all the States I am familiar with, and it is a large number of States, they also tax the resident owner on his stock where there is no local stock; and here in the State of New York the owner is entirely exempt from taxation, and that is a great advantage, as such men as Mr. Gould can tell you, where they own a large amount of railroad stock without any tax at all; the taxes were, until two or three years ago, less on that kind of property than any other property you could have in the State of New York; frequently those wealthy men who have had large amounts of stock are assessed on, perhaps, only \$500,000 on personal property, when they have, perhaps, \$20,000,000 of stock; I am speaking of New York city, where I have examined the records and know how it is; I was employed by the telegraph companies

for fourteen years, to attend to the telegraph taxation in every State in the Union; it was the Western Union and Postal Union; so I know what I am speaking about, because I have had experience in every State, and in the State of New York I have had experience in every county in the State; the paper I have drawn up has been carefully drawn up, from time to time; instead of trying to reform taxation, what I advocate is the enforcement of the present tax laws, and I have endeavored to show how it can be enforced if it requires any amendment to enforce them, the Legislature can fix it.

- Q. This is a review of the present law as it stands? A. Yes.
- Q. And suggestions as to how to enforce them? A. Yes, sir.
- Q. That you submit to the committee? A. Yes, sir; one thing I would like to state, and that is, taxes are not paid as much as should be; it is not the corruption of the assessors, but it is because they get into a certain rut and follow it, year after year; I have known it to happen for fifteen years; I have known forms drawn in 1851 to be used, although the law has been changed six or eight times.
- Q. Do you know about the percentage of taxation in New York city? A. Yes; all about it.
- Q. What is it? A. One and seventy-one one hundredths last year, 1.91 this year.
- Q. That is the tax rate; I asked you what percentage of the full value is assessed here? A. I state in there; it is probably about 40 per cent, but with corporations it is different; that covers it entirely; I give the entire estimate; I have taken pains to examine from the railroad reports for two years; I have been employed in that capacity for corporations about eighteen months, and since that time I have changed; I was a tax-dodger as they call it, at one time, and now I have changed and am a tax reformer.

ASSESSMENT AND TAXATION OF CORPORATIONS.

The mode of ascertaining the property of corporations liable to taxation is as important as is the mode and extent of taxation. It is this that may make a tax oppressive or odious, or make it of no effect,— if a law for ascertaining the taxable property of corporations is not enforced, the tax under it will be of little value.

Although the State of New York has long felt the harmful effects of the neglected enforcement of the tax laws and has, from time to time, attempted to find a remedy for obtaining more revenue with the least hardship upon the individual taxpayer, it seems that the enforcement of the tax laws already existing have been overlooked — we mean the mode of ascertaining taxable property, where the property of an individual has been looked after sharply, but the property of corporations has been allowed to escape a large part of a just tax upon property according to its value.

The statute law, from time to time, can well be followed to prove the many ineffectual attempts to reach property liable to taxation.

The Revised Statutes of 1830 provide (part 1, chap. 13, § 2, article 2, vol. 1, p. 399), that "between the 1st days of May and July, in each year, the local assessors shall proceed to 'ascertain, by diligent inquiry, the names of all taxable inhabitants in their respective towns or wards, and also all the taxable property, real and personal, within the same, for purposes of assessment.'" (8)

The time in which to make said inquiries in cities and villages is now designated in the respective charters of cities and villages.

Whatever difficulty may arise in regard to ascertaining the property of individuals, it was then and is now slight, compared with like inquiries in regard to corporations. In order to facilitate and help the assessors, it was further provided in section 3, title 4 of the same chapter, that corporations should make a report to local assessors of the amount of the capital paid in and the the amount thereof expended for real estate as is owned by them. (Sections 3, 4, 5, as amended by chapter 654, Laws 1853.)

Section 7, as amended by chapter 202, Laws 1892, direct the manner of the making up of the assessment-roll, and the Laws of 1857, chapter 456 directs the mode of assessments of the property of corporations that are required to make said statement to the assessors.

At that time (1853) it was comparatively easy to ascertain the extent and ownership of real estate as defined by title 1 of said chapter (p. 387). Railroad corporations were about the only corporations that there was any necessity of applying the strict rule of reporting its property and the value, etc. This was reported to the local assessors by them, but other corporations were generally allowed to state verbally to the local assessors such information as was asked of their officers, personally. Very little inconvenience or injustice resulted from the tax mode of information at that time about ascertaining the actual value of real estate, because it was visible and could be seen and described and its value might be ascertained by observation and comparison with other real property.

This was permitted without observing much injustice in allowing the undervaluation of the real estate owned and used by corporations.

Section 4 of the said laws of 1853 required that corporations shall also deliver to the State Comptroller, on or before the 1st day of July in each year, the same kind of statement of their property that they delivered to the assessors.

It was not until the definition of taxable real estate was extended by amending the Revised Statutes by chapter 293 of the Laws of 1881, so as to include almost every structure upon land and above and under streets and roads and private grounds and on river bottoms, mains, pipes, tanks, etc., that great difficulty arose. This law is still further extended by chapter 659 of the Laws of 1886, as to the kind of property that shall be taxed as real estate. Under Laws of 1878, chapter 203, pipe lines were locally assessed as real estate.

Now, after fourteen years existence of that law defining real estate, which is more important and necessary in cities where many kinds of pipes are used for water, steam, heat, power, telegraph and telephone wires and cables, pneumatic tubes, pumping oil, etc., all under ground or under water, and when they are overhead or above the ground and can be seen but their ownership can not be ascertained, whether belonging to the public or to indi-

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viduals or corporations, the necessity of enforcing the law requiring a statement from corporations as to the extent and value of such kinds of property is imperative and a matter of justice to all taxpayers.

Most of that kind of property is in use by corporations, and it is upon or under public property that it is supported by individual taxpayers.

In the large cities it is the large corporations that own the kind of property that is the most difficult to ascertain the ownership, value and extent of it for the reason above stated, but they never make that report to the local assessors or to the State Comptroller.

The said required statements are important and necessary in ascertaining the property that is taxable as real estate, but are also necessary to ascertain the value of assets of a corporation so as to properly tax the capital stock of such corporation. Equitable Gas Light Co. v. Barker, 144 N. Y., 94; Laws 1857, chap. 456.

Where no report is made the assessors must make diligent inquiry and find out the ownership of such property and the value of it. The practical working of this in large cities is that of mere guess work as to the value and ownership of that kind of property, and more than all an omission from the assessment-roll of not less than half of that kind of property.

It can readily be ascertained from the assessment-rolls in any city the assessed valuation of the property of corporations, real and personal, separately stated and the amount of tax levied and assessed thereon, State and local separately, each year.

In more than eight cities in New York State, it amounts to an omission of millions of dollars of property taxable as real estate. The annual reports of the State Railroad Commissioners will show to what extent this applies to street railroad property when compared to assessment-rolls. There are other special reports that will give something of an idea of the extent and value of the property of other corporations. In the city of New York where this requirement is obviously most important and necessary and the corporations have much of that kind of obscure property, and

where the tax commissioners annually send out printed forms of questions to be answered by corporations, for purposes of annual taxation, those corporations that have the largest and most valuable holdings of said most difficult, obscure and hidden kinds of property entirely disregard the answer relating to it, and fail to state that kind of property in any manner. This is particularly true of those corporations that are taxable under chapter 659 of the Laws of 1886.

Who is obtaining the benefit of this omission to report to the local assessors and the State Comptroller, the ownership and value and cost of this kind of property? It is the corporations by having undervaluation and less tax upon it. This affects the individual taxpayers that have all their property assessed and taxed according to its value.

If, by this means, the corporations were assessed and taxed to an excessive extent, would they be willing to let the matter rest in oblivion?

It is also provided by section 4 that the like statement shall be delivered to the State Comptroller on or before the 1st day of July, in each year. This is eminently proper and necessary so as to be accessible to the State Board of Assessors.

It is the duty of the State Board of Assessors to look after these local assessments and ascertain the actual value of taxable property and see how much has been omitted when they apportion the levy of State tax upon counties.

They usually let the matter rest in other parts of the State but add, in some instances, \$100,000,000 of taxable property in New York city to the total assessment-roll here, and the property of individuals must bear the additional burden, above the additional rate applied elsewhere.

What is the remedy now, to compel corporations to make the important report to the local assessors, and what is the penalty if they make no report to the local assessors? The answer is, no available remedy and no penalty. There is a nominal penalty that can be applied but never has been exercised because it is so cumbersome. It is provided by sections 5 and 6 of the same

statute, that in case the reports of the property were not made to the local assessors and the State Comptroller each year, that the State Comptroller shall report the same to the Attorney-General, and he may commence an action to recover a penalty of \$250 from such delinquent corporations, but if such corporations make the reports and pay the cost of the prosecution it will be excused (section 6) if it was not a willful disregard of the law.

The local assessors have no remedy under the statute but must rely upon the action of the State Comptroller and the Attorney-General.

It is a bungling way of enforcing the requirements of the statute. If the prosecution of the delinquent corporation is not promptly made the statement from the corporation can not be obtained in time to have it placed upon the assessment-roll for that year, and the benefit that might be derived by that course will be lost.

It has always worked admirably in preventing any action under the law, and nothing has ever been done or any attempt made to enforce the law requiring said report.

The remedy should be placed in the hands of the local assessors by statute, and a report to them might be promptly enforced by mandamus in such cases of neglect.

This should be authorized by law in addition to the statutes existing, already referred to.

If the statement was made to the local assessors it would soon be in the hands of the State Comptroller and the annual reports of the board of supervisors would show how much each corporation was locally assessed upon the real estate and also upon its personal property, and thus it would readily be seen whether the local assessments had been as full as the law requires, and also whether the property has been assessed as real estate or personal property, and thus the annual tax for State purposes upon the real estate of all corporations would be enforced and the State Board of Assessors would then have facts and figures to make their apportionments of State tax upon taxable property in counties

and not have complaints made of unfair and unjust equalization of valuation and consequently unequal taxation.

There is a widespread opinion among assessors and courts that it makes no difference in taxation whether corporate property is assessed as real estate or as personal property, so long as it is all assessed.

The Court of Appeals, in an opinion, took occasion to say, in accordance with the brief and points of counsel in the case of Equitable Gas Light Co. v. Barker, 144 N. Y., p. 94, that it made no difference in taxation whether the property of the company was assessed as real estate or as personal property, so long as it was all assessed. This is erroneous.

Under the present law of 1881, chapter 361, for the taxation of corporations for State purposes, I will show further on in this paper that it is of vital importance to the extent of the local taxation of the value of real estate at the annual rate of State taxation without any deduction, while as personal property it can not be locally taxed at all for State purposes; and while it is not taxable under the said law of 1881, any indebtedness and other exemption may be deducted from the value of the personal property of corporations under chapter 202 of 1892, and that this is frequently carried to such an extent as to virtually exempt from local taxation the largest portion of property belonging to corporations.

It should be borne in mind that the corporations above mentioned are not only exempted from local taxation for State purposes, but the stock of the corporation, when in the hands of an individual, may be exempt from local taxation for any purpose, because the debts of an individual can be deducted from the value of personal property by him. (R. S., pt. 1, chap. 13, tit. 1, § 7.) The obvious effect of this is that an immense amount of corporate property is not taxed at all.

It is obvious that the law about statements from corporations should be amended or added to in some manner. This should be done at once so as to have the benefit of it in time to apply it to the assessment for the year 1896.

It may be well to mention the fact that corporations are not now assessed upon their property for local improvements, such as opening, regulating, grading and paving of streets, or for sewers and any other matters of like nature which individuals are. They are omitted from the assessment-list for such purposes on the grounds that they are not benefited by such improvements, yet when streets are opened, graded and paved, and sewered and improved, and become thickly populated in consequence of such improvements, which are paid for by the other adjoining property owners, and thus become profitable for corporations, they are ready to take them for their own purposes without paying anything therefor, or without any contribution toward the improvements that are thereafter made.

PART II.

THE LOCAL TAXATION OF CORPORATIONS.

Under the general laws of the State, corporations are to be taxed in the same manner as elsewhere in the State. The valuation and the mode of making it up by the local assessors is not uniform either as to the mode of ascertaining the kind of property taxable or the amount of the valuation. The statute (Laws of 1885, ch. 201) provides that real estate shall be assessed at its full value. The assessors do not generally regard this law, but make the assessments as was done before the law was enacted.

In some places all kinds of real property is valued at from 40 to 60 per cent. of its full value — except that owned by a corporation, that is or may be assessed at its full value or cost price.

The question as to what should be regarded as real estate and what as personal property is very important, as will be hereinafter shown. The Revised Statutes, pt. 1, ch. 13, tit. 1, as amended by the Laws of 1881, ch. 293, and further extended to electrical companies by Laws 1886, ch. 659, is the statute law at this time defining real estate.

The rate for local taxation of property for State purposes is the same upon all kind of taxable property and in all places in the State, but the rate of valuation is different in different localities, and the effect of this upon the revenue of the State is the same as a change of the rate of taxation. The State may lose one-half of the revenue it is entitled to by one-half reduction in the local valuation. The proportion of loss by the State is the proportion of decrease of the valuation in any location from the legal standard, which is the market valuation of the property, as before stated, or in some instances the amount of the capital of a corporation that is expended for real estate or the cost of its work within the State.

In many kinds of corporations the statute provides how much of its capital may be put in real estate. Other kinds of corporations are allowed to hold all the real estate that is necessary for their business.

Corporations that are locally taxable upon their property under the New York Revised Statutes before stated are taxable on both real and personal property (with some exceptions of personal property specified by the statute).

The value of the capital stock is locally taxable and so are the holdings of personal property. This local taxation is for State and local purposes. The real estate is taxable the same as if in the hands of an individual, without any deduction on account of any bonds or mortgages upon it or any indebtedness of the corporation. A domestic corporation can have the assessed value of its real estate and all its indebtedness deducted from the value of its capital stock and personal property.

Under chapter 202, Laws 1892, this deduction may, and often does, wipe out the entire valuation of the capital stock and personal property of a corporation so that it is not locally taxed at all.

The State tax on corporations under the Law of 1881, chapter 361, is placed upon the entire value of the capital and real and personal property without regard to any indebtedness of the corporation. This State rate of taxation is fixed at one and a half mills on the valuation. In certain cases this is all that the State can get by reason of the mode of local valuation. This is much less than the State would be entitled to if section 8 of the Law of 1881

did not prevent it. For instance, the State rate applied to local taxation of real and personal property in 1894 was 2 18-100 mills on the dollar of valuation. A corporation that had no real estate had an indebtedness that was shown to be more than its assessed value of capital and personal property, was not subject to this tax. But if it had any real estate, that was subject to this State tax of 2 18-100 mills on the dollar, according to its value.

Now, here is the point I wish to make: That if property that is taken by the assessors and put on the assessment-roll as personal property instead of real estate the State may and often does lose the entire local tax of 2 18-100 mills, which it would get if the property was assessed as real estate.

Again, a corporation that is taxed by the State under the law of 1881 is not locally taxable upon its property, only the real estate it holds (section 8). When the local assessors regard all the property of a corporation as personal property, it is thus not locally taxable for State purposes. This is a great loss to the State and a great saving to many corporations located in New York city, where the practice has been to place a very large amount of property of certain kinds of corporations on the assessment-roll as personal property, while the real estate valuations were proportionately small. This is particularly true of the elevated railroad and the trolley and cable railroads in New York city. Their rights of way and structures were placed at comparatively a low valuation as real estate, and in one instance the capital stock and personal property was assessed at over \$17,000,000, and the court held that the assessed value of the real estate and the bonds and other indebtedness which was shown to the assessors to exist should be deducted from the said assessed value of the capital stock and personal property of the railroad under chapter 202, Laws 1892. This entirely wiped out the assessed value, and the capital and personal property escaped local taxation.

The same rule has been applied by the assessors in New York city to telegraph, telephone and electric-light corporations for several years. Their lines, dynamos, batteries, machinery, etc., are locally taxable as real estate under Laws 1881, chapter 293, and

Laws 1886, chapter 659. They all have assessed real estate, outstanding bonds, and other indebtedness which the local assessors deduct after fixing the amount of their capital and personal property on the assessment-roll, which in many instances render them free from local taxation for nearly all their valuable property. Practically this class of corporations are only taxed upon a small portion of their real estate.

From my personal observation I believe that more than 95 per cent. of the entire property of telegraph, telephone and electric light companies in the city of New York should be assessed as real estate, and the elevated, cable and trolley railroads' property should be assessed at not less than 70 per cent. as real estate. What property have some of those corporations besides their lines and appurtenances but a very small supply of office furniture? My estimate is that there is now not less than \$30,000,000 in property of that class of corporations that can and should be assessed as real estate in New York city in excess of any assessment now against them upon the local assessment rolls in said New York city.

This shows the States loses no less than \$60,000 revenue per year by way of this mode of assessment in New York city alone, and the city loses more than half a million tax for local purposes.

(The amount in other large cities by not having this law of 1886, chapter 659, applied to electric light and trolley railroad companies I have not yet estimated.)

Again, this sum of \$30,000,000 valuation would be taken into consideration by the State Board of Assessors in the equalization and apportionment of the State tax to be raised on the taxable property in New York city.

The total increased valuation of taxable property in the State would have a perceptible tendency to lower the rate of direct taxation by the State, as well as to lower the rate of local taxation upon individuals, because the more the taxable valuation, the less the rate to obtain a required sum.

In regard to local taxation of foreign corporations in New York city, the practice is to assess the value of real estate and personal

property in the State, not to make or allow any deductions from the real estate or valuation of the personal property employed in the State, on account of any indebtedness in the State or elsewhere, and to tax all the property of such corporations within the State, some as real estate and some as personal property. der such circumstances it makes much less difference whether the property is regarded as real or personal property, as it is all But when it pays the State tax under the law of 1881, the personal property is not locally taxed for the State, to wit, in 1894 the local rate on personal property of corporations that paid the State tax on capital in New York city was \$1.581 per hundred, while on other personal property it was \$1.791 per hundred, a difference of little more than \$2 on \$1,000 valuation in favor of corporations that only paid \$1.50 per \$1,000, being 50 cents less per \$1,000 to the State under the law of 1881, chapter 361. thus appears that the State, in many instances, may be getting less tax under that law of 1881 than it would under the prior mode of local taxation for State purposes. But the courts have construed the mode of fixing the amount of capital employed in the State of such corporations as have a portion of their capital employed out of the State to such an extent that, as the law now stands, the State has an increased revenue under it. rule does not apply to corporations that have all their capital employed within New York State. In such cases, there may be, and are, instances where the State gets a less revenue under the law of 1881 than it would if the capital and personal property of the corporation was still subject to State local taxation. stance, the State now gets a tax of one and one-half mills on each dollar of valuation by the direct tax on the capital of a corporation that has no real estate. This exempts all that kind of property and the personal property from State local taxation. capital was all in personal property, subject to State local taxation in 1894, the State would get 2 18-100 mills on each dollar of valuation.

It, therefore, behoves the State to have all the property of corporations locally assessed as real estate that the laws permit.

In such case the State gets, on the real estate, one and one-half mills, plus 2 18-100 mills, on each dollar of such valuation, which makes a total of 3 68-100 mills on the dollar on the real estate. If it is locally assessed as personal property, only the direct tax of one and one-half mills can be obtained in any event for State purposes.

The extent of the errors and grievances above set forth have not been ascertained in other large cities. It can mostly be found where the large electric light companies have plants, and the trolley railroads and elevated roads are.

Now, therefore, what I contend is the proper and legal mode for the local assessment and taxation of the property of corporations is this:

- 1. Assess all the property as real estate that the law permits.
- 2. Find the value of the capital, and from it deduct the assessed value of the real estate in the State paid for out of the capital.
 - 3. Assess all the personal property at its value.
- 4. Deduct the amount of any indebtedness by way of bond and mortgage, or otherwise, from the value of the personal property.
- 5. Thus leaving for taxation the value of the capital and personal property, after deducting therefrom the assessed value of the real estate paid for out of the capital and other exempt property specified in the statute. The 10 per cent. on the capital should not be deducted as exempt surplus earnings where that amount has been put into betterments or in the actual use of the corporation.

PART II.

OF STATE TAXATION OF EARNINGS OF GAS, WATER, ELECTRIC LIGHT, STEAM POWER, HEATING, ELECTRICAL SUBWAYS AND PIPE LINE COMPANIES.

The question considered here is, can that class of companies above named, be taxed upon their gross earnings under section 6 of the act of 1880, chapter 542, as amended in 1881, chapter 361. The Comptroller's reports of tax receipts for that class of com-

panies, show that they have been taxed upon their capital and dividends, the same as mining and other companies, under section 3 of the act, but many of them are not taxed under section 6.

When this law of 1880 was amended in 1881, by chapter 361, it was intended to cover classes of corporations by a tax upon capital, and another upon the business earnings of said corporations, particularly specifying the kinds of corporations excepted therefrom subject to the tax upon capital. (Section 3.) Some of the companies soon claimed to be manufacturing companies, and as such, the courts held were excepted from the operation of section 3. A legislative construction was given to section 3 in 1889, and it says: "Which exceptions, however, shall not include gas companies, trust companies, electric or steam heating, lighting and power companies."

These terms have properly been appled to include the class of corporations which we will call "pipe line" companies as to the taxation of capital.

Section 6 states that in addition to the tax upon capital a certain class of corporations, specified therein, must pay a tax at the rate of one-half of 1 per centum upon the gross earnings in this State of said corporations or company or association.

Under section 6 of the act, a pipe line or transportation route or line is expressly named as being taxable on its gross earnings at the rate of five mills on each dollar thereof.

The words "pipe line" are merely used as a comprehensive term, and not as applying to only one mode of organization.

Pipe line corporations can be organized under laws of 1878, chapter 203, "for the purpose of constructing and operating for the public use lines of pipe for the conveyance or transportation therein of petroleum, gas, liquids or any products or property."

The electrical subway in New York city can be organized under this law.

Oil pipe lines are principally organized under this law.

It is not necessary that the corporation should be organized under the laws of 1878, chapter 203, in regard to the incorporation of pipe lines. Section 6 says of them, "now or hereafter incor-

porated or organized by or under any law of this State," etc., or "any other State, " * " or leasing to or from another corporation," etc.

A company organized under a law for the formation of gas companies, or water companies, or electric light or power companies for driving or propelling boats or crafts, or for supplying hot water or hot steam for power or heating, etc., or any other purpose for which pipe lines are used, whether organized under the manufacturing act of 1848, as amended by chapter 242 of the Laws of 1880, chapter 30d of 1882, or chapter 73 of Laws of 1882, authorizing the formation of companies for manufacturing and using electricity for producing light, heat or power, and authorizing them to use pipes, etc., in, on, over and under the streets, etc., or any other law. If pipes are used for the purposes specified, the gross earnings therefor should be subject to taxation under section 6, the same as any other transportation company therein specified.

Electric lights are transmitted as a fluid on a conductor that is covered by a pipe of lead or iron, or gutta percha, or some other substance, under ground or above ground. So it should not be properly excepted from that class of transportation, by means of a "pipe line."

Tubes placed under ground for the purpose of transmitting letters and packages, by means of compressed air, should be classed as pipe lines.

The last two lines of section 6 have led to the narrow construction to include only four kinds of corporations that the tax is applicable to. The words "toll and transportation" are also there used in a general and comprehensive way, and not in a technical and narrow sense; they include tolls and gross earnings of all kinds of transportation, whether by land or water, above ground or under ground, in pipes by means of steam pumps, whether above ground or under ground, whether drawn or propelled by steam or any other power applied to carriages or to boats doing the business in the transportation, and pay for it in the tolls and earnings.

It would seem that by the construction of section 3 and section

6 it was intended to authorize the tax upon the gross earnings of said companies.

It should be observed that "gross earnings" is the term used in the statute instead of gross receipts, which latter term might apply to some other kinds of business corporations. Gross earnings makes it plain that it can only be applied to those that have earnings distinguished from receipts.

Again, as a further reason for applying section 6 to such companies as use pipe lines in their business, and have earnings therefrom, we see that all that kind of property used by corporations is assessed and taxed locally by authority of chapter 293 of the Laws of 1881, which requires that "all main pipes and tanks laid in or placed in, upon, above or under any public or private street or place," etc., shall be assessed and taxed as real estate. (Chapter 659 of Laws of 1886, merely defines certain connections of telegraph, telephone and electric light lines, to be assessed as real estate.)

The courts have held, under that law, defining real estate, that all the kinds of corporations using such described property for gas, water, light, steam-power and heating and transportation of oil, and other purposes, are and should be taxed as real estate; the subway companies of New York are so taxed. The local assessment rolls are full of such instances of local assessments and taxation as real estate of those companies without any question on their part as to its propriety.

Furthermore, such companies all claim and get their capital and personal property exempt from local State taxation, under section 8, because the State taxes them upon their capital.

This is very unfair and unjust to all other kinds of corporations; those that pay their State tax upon their capital, and also upon their gross earnings, under chapter 542, Laws of 1880, as amended, are taxed much heavier than any other corporations that are not so taxed, notwithstanding they are exempt from local State taxation. But the pipe line class, that are not taxed by the State Comproller under section 6, get the same exemption that others do that pay upon their gross earnings.

Manufacturing corporations that are not taxable by the State Comptroller under said laws of 1881, must pay the local State tax, which varies each year from 3 52-100 mills for the year 1894.

It thus appears that the present application of the State Tax Law upon the corporations that pay the tax upon their capital and do not pay a tax upon their gross earnings, are paying the State much less tax than they would if the laws of 1880 and 1881 did not exist, and that in many instances is a practical hindrance to State revenue; and a less tax than is imposed upon the property of individuals.

For instance, we will take a manufacturing corporation that is not subject to any State tax upon its capital under the laws of 1881; if it owns real estate and personal property, and owes no debts, it must pay the State tax at the rate of 2 18-100 mills upon the valuation of its property which is equal to a tax upon the dividend of nearly nine per centum under section 3 of the Laws of 1881, which is one-fourth mill upon each per cent. of annual dividend, then it is $1\frac{1}{2}$ mills upon each dollar of valuation under that law.

It was to equalize and regulate State tax upon those corporations by also requiring upon their gross earnings, in addition to the tax upon their capital (section 6).

It was not to relieve any corporation therein named from paying the same amount of taxes that are imposed upon the property of an individual or upon other corporations.

As the law is now practically construed this is a great relief to all pipe lines and electric light, power, and some other modes of transportation of useful products by corporations in many of the large cities and towns in the State.

No report of the gross earnings of said class of corporations have ever been required by the State Comptroller since the amendment of section 3 in 1889. That amendment was made necessary by the decision of the court that they were not subject to the Law of 1881, chapter 361, because they were manufacturing corporations; the amendment of section 3 in 1889 removed that objection. Comptroller Campbell never asked that class of corpora-

tions to make any report of its earnings as it would seem to be required by section 6 of the act and no attempt has ever been made by him to tax the earnings of said corporations. It would seem that since the amendment of 1889 their gross earnings are taxable under section 6 from that time until the present. The amount, if any, now due to the State from them is large, and the question must sooner or later be brought up before a law is passed that will prevent any such claim for back taxes being made

We have three modes of taxing corporations for State purposes in practical operation:

- 1. Taxation of capital and dividends and gross earnings under sections 3 and 6 of Laws of 1881.
- 2. Taxation of capital and dividends only, under section 3, Laws of 1881, as amended in 1889.
- 3. Taxation of capital and property under another general law fixing the annual rate of State tax. This latter now applies to all kinds of manufacturing corporations. When we know the kinds of corporations that are taxed within each class above named, we feel that it should be equalized in some other manner than the present practice. The law should be enforced as to tax on gross earnings in the second class, or a new law should be made to that effect that will render it better understood and applied.

R. S. GUERNSEY,

58 Cedar Street, New York City.

New York, December 5, 1895.

The committee convened Friday, December 6, 1895, at 10 a.m., at the Metropole Hotel, New York city.

Lewis L. Delafield, called and sworn, testified:

- Q. Where do you reside A. At the Rockingham apartment-house, in the city of New York.
- Q. Are you the secretary of the Rapid Transit Commission? A. I am.

- Q. And have been how long? A. Since the organization of the present commission in the month of June, 1894.
- Q. When was this commission created? A. The board as now constituted was created by chapter 752 of the Laws of 1894, and the commission organized under that act in the month of June, 1894; I think June 8th; prior to that time there was a board organized under the Laws of 1891.
- Q. And was that the first statute creating it? A. No; there was a commission created under former acts, notably under the acts of 1875.
- Q. Has there been a rapid transit commission here of one kind or another since that time? A. There have been other commissions appointed to consider the subject of rapid transit under the laws authorizing rapid transit railways ever since 1867, to my own knowledge, and possibly prior to that.
- Q. And the act of 1894, is that an act amendatory of the preceding acts? A. Nominally, but it actually creates a new scheme.
- Q. Does it legislate out of office the commissioners that were then in office? A. It did; the act itself appointed a new commission with three ex-officio members.
- Q. The act of 1891, did that legislate out of existence the commission that then existed? A. I think not; I think the act of 1891 was designed to create a new scheme and it dealt with the subject not dealt with by the former statute.
- Q. What was that? A. The general subject of a creation of a rapid transit railway in the city of New York
- Q. Who were the commissioners under the act of 1891? A. I am unable to answer correctly at this time.
- Q. Do you know any of them? A. Yes, Mr. Inman, Mr. Starin, Mr. Steinway, Mr. Samuel Spencer at one time one of the commissioners; as to the rest I am unable to answer; I was not connected with the board at that time.
- Q. And the act of 1894 named Mr. Steinway, Mr. Inman and Mr. Low?

(Witness refers to memorandum.)

- A. The act of 1894 did not name Mr. Inman; it provided there should be a commission consisting of the mayor of the city, the comptroller, the president of the Chamber of Commerce of the city of New York, William Steinway, Seth Low, John Clafflin, Alexander E. Orr and John H. Starin; at the time of the passage of this act Alexander E. Orr was not president of the Chamber of Commerce, but before the organization of this commission he was elected president of the Chamber of Commerce, and became a member of the commission in his ex-officio capacity as well as his individual capacity; he resigned ex-officio and Mr. Inman was elected.
- Q. The commission itself was authorized to fill vacancies? A. Yes, sir; of course; except in the ex-officio position.
- Q. Exactly; that is the office, not the individual; now, under the act of 1894 the commission thus created organized itself? A. It did.
- Q. By the election of what one of its members president? A. By the election of Alexander E. Orr, president; John H. Starin, vice-president and John Clafflin as the treasurer.
- Q. And yourself as the secretary? A. Yes, sir; Mr. William B. Parsons as the chief engineer, and Henry R. Beekman, as one of the counsel, and Albert B. Boardman as another; upon the election of Mr. Beekman to the Superior Court, the firms of Parsons, Shepard & Ogden and Tracy, Boardman & Platt were constituted counsel of the board; otherwise there has been no change.
- Q. When did the commission meet for the purpose of its organization?

(Witness refers to memorandum.)

- A. On June 8, 1894.
- Q. What, Mr. Delafield, were your duties as secretary of the commission? A. Usual duties which are appropriate to that office; I presume also the fact that I was a lawyer may possibly have controlled the action of the board in choosing me.
 - Q. You kept records of all its proceedings? A. Yes.
- Q. And anything beyond that? A. No; I performed the duties appropriate to the office of secretary.

- Q. Do you have anything to do with the finances of the commission? A. Yes, the books are kept by me and by my clerks.
- Q. So that under your direct supervision the books of the company are kept? A. Yes; I have complete knowledge of the finances.
- Q. Which makes you familiar with all its expenditures and all its finances? A. Yes.
- Q. What was the appropriation under this act of 1894, if the amount was stated? A. The rapid transit board is authorized from time to time to make requisition from time to time on the board of estimate and apportionment of the city of New York, of the amounts required.
- Q. Does this scheme contemplate rapid transit in the city of Brooklyn and the commission have jurisdiction to deal with any subject of that character in the city of Brooklyn? A. The law is a general law, and in my opinion any city whose population shall hereafter amount to 1,000,000 inhabitants will come within the terms of the law; I think most of its provisions are applicable to the city of Brooklyn, as well as the city of New York.
- Q. I see the mayor of Brooklyn is an ex-officio member? A. He is, as well as the comptroller of the city.
- Q. Last winter an amendment was proposed to this act? A. Last winter an amendatory act was passed by the Legislature.
- Q. From what source did that amendment spring? A. It was prepared by the board itself, and its counsel, Mr. Shephard, who is now present, submitted to the Legislature by the board.
- Q. Was that returned to the mayor of New York for his approval? A. It was; as it affected all cities of the first class it was necessarily returned to the mayor for his approval under the terms of the Constitution.
- Q. Did it affect any aside from the city of New York? A. I have no knowledge as to the population of the city of Brooklyn.
- Q. If it were a general act, how was the approval of the mayor of the city of New York essential? A. The bill may be a general law within the provision of the Constitution that only general laws shall be passed authorizing the laying down of railroad

track, and at the same time by a special city law within the meaning of the Constitution requiring submission to the mayor of the city for approval; that merely is my opinion as a lawyer.

- Q. Here is an act that may or may not apply to the city of Brooklyn, as well as the city of New York, depending on its population; now, if it applies to the city of Brooklyn, it is just as essential the mayor of the city of Brooklyn should approve of it? A. I have no knowledge on the subject of whom the act was submitted to.
- Q. I say, if that is true, that it actually applies to the city of Brooklyn it would be as essential that the mayor of that city should approve as the mayor of the city of New York? A. If you ask for my opinion on the subject, I say if the city of Brooklyn fell within the description of cities within the act, it would be necessary to receive the assent of the mayor; that is, say at the time of the passage of the law, Brooklyn was within the cities embraced within the terms.
- Q. And the same is true of Buffalo, assuming that it had the population, but that fact was unknown? A. I can express no opinion about the city of Buffalo; I know that Buffalo is a city of the first class, and that it has more than 250,000 population.
- Q. But if there were several cities where this act were applicable, do you think it would have to go to the mayor of each of them for approval, or would not it become a law without going to either of them? A. If, under the terms of the new Constitution, it were a special city law, and affected less than all the cities of one class, then it would require the approval of the mayors of each city to which it was applicable by its terms.
- Q. One might disapprove and exempt this city, and the other adopt and give it affect as to the city of which he was mayor? A. That involves an opinion on constitutional law which I have not examined sufficiently to express an opinion upon.
- Q. Now, Mr. Delafield, what different schemes has the commission had under consideration since you became its secretary, if any? A. The only scheme by which, it was authorized under the law to consider.

Q. What is that? A. Upon the approval of municipal construction by the vote of the people of the city was a scheme to give rapid transit to the city; it also had incidentally the power to grant additional franchises to certain existing railroads, if they applied for them.

By Mr. Nixon:

Q. Let Mr. Delafield tell what the provisions of the rapid transit act are and what they allow your commission to do and under what circumstances and under what conditions. A. I will as well as I can; the law provided that the rapid transit board, after its organization, might do one of two things; it might itself adopt a complete and new plan for the construction of a rapid transit railway, in which event it would be of course necessary to obtain the constitutional consents to build a road from the local authorities or substituted consents of the court; or it might adopt the plan of the old board in its entirety; the old board had framed a franchise and obtained the consents required by the Constitution; the law provided whenever it should have adopted the plan of the old commission or a new plan of its own, and the commission obtained the permission of the local authorities and of the property owners, if it adopted a plan of its own, it should submit to the voters of the city the question: "Shall the rapid transit road be constructed at the expense of the city?" when the board came into existence, it was, therefore, confronted with this situation, it might itself examine the whole subject de nova, and after adopting a plan for a new system obtain the consent of the local authorities and the property owners, or, it might adopt a plan of the old board in its entirety, and then submit the question of municipal construction to the voters with the least possible delay; the law provided further, in the event of the people voted in favor of municipal construction the rapid transit board was authorized to change and modify the routes, plans or specifications, in such particulars as to the board may seem desirable, or to adopt several and different routes for such railway or railways; the board was therefore confronted with the alternative to adopt the old plan and submit the question immediately to the people, or might adopt the new plan.

- Q. What was the old plan? A. The old plan was for an underground road; the board believed it was necessary to submit the question of principal construction to the popular vote at the earliest day, and adopted the plan of the old board.
- Q. What is your idea of the term "Municipal construction;" do you mean the lending of the credit to some corporation? A. You can not do that.
- Q. By way of guaranty? A. There is no way to do that; the present transit system involves the building of rapid transit railways with moneys of the city which shall belong to the city; the actual work of construction and the work of operation is committed to a corporation which is to act as the agent of the city; the board, accordingly, referring to the subject I was speaking of before, adopted the plan of the old board and submitted the plan of municipal construction to the people of the city and that was submitted at the general election in November, 1894, and was carried by a very large majority.
- Q. Pardon me; when you submitted that question what was the wording of the ballot when you submitted that question? A. One ballot read "For construction of rapid transit road," and the other "Against municipal construction of rapid transit road;" the people did not vote on any particular plan or any particular road.
- Q. How could you submit that question under that act? A. Because the act itself provided it.
- Q. Does it; you read it a minute ago; are you not required to adopt a system? A. It was required to adopt some system.
- Q. Yes. A. The law did not require them to vote on any particular system; the law provided if they voted in favor of municipal construction the commissioners might change the plan.
- Q. I wish, right here, if you will read that part of the statute; I think you did a moment ago; authorizing this commission to submit that question to the popular vote; I may not have understood it fully? A. The provision is contained in section 12 of the

act of 1894, I think; there seems to be a topographical error, sir; if you will permit me to add, Mr. Chairman, the vote on this question was the heaviest vote ever cast in the city of New York on any question; the new constitution, and another question, and the question of the consolidation with the city of Brooklyn was submitted at the same election, and the ballots cast on municipal construction of rapid transit exceeded, by some thousands, the ballots cast upon any other question.

By Mr. Nixon:

Q. You take that as an indication of the interest of the people on the question? A. Certainly.

By Mr. Wade:

- Q. As you construed this section 12, it was necessary for the commission, before it requested these ballots to be completed, to adopt some system before it requested these ballots to be printed? A. Such was the opinion of the counsel of the board, and such was my own opinion.
- Q. Even the details of construction? A. It was necessary that even the details of construction should be passed upon.
- Q. Do you think the people of the city of New York understood that they were voting for the construction of an underground railway when they voted upon this question? A. The fact that the commission contemplated the building of a subsurface rapid transit railway had been given the widest publicity prior to the election; it had been constantly referred to in all the newspapers, and I can have no doubt whatever the vote on that question was a very intelligent vote; I will also state that prior to the election the commissioners had issued a statement, which had been published in all the newspapers, in which they explained in the event of the vote in favor of municipal construction it was their purpose to re-examine the whole subject and change the plans on whatever points they deemed wise.
 - Q. That fact had been given equal publicity? A. Yes, sir.

- Q. So that if I lived here and voted on that question and voted for the construction of some kind, in case I voted for it, of a railway by the city, I had no means of knowing anything about the system that I voted for? A. Or the system that might be ultimately adopted by the board
 - Q. Certainly. A. Yes.
- Q. Because they gave me notice they were going to overhaul this entire scheme and might adopt a new system entirely; instead of building a subway build an elevated road or a surface road. A. Under the law they could not build a surface street road; that is my present impression.
- Q. Any that they were authorized to consider under this statute? A. The general publicity was given to the fact that it was within the power of the board to completely change all the plans adopted prior to the election; to adopt such system of rapid transit as the further investigation might lead them to believe to be wise.
- Q. Under this act, Mr. Delafield, you considered that the commission might adopt an elevated railway system for rapid transit?

 A. In my opinion it might have adopted such a system.
- Q. It may now, may it not; it is authorized to change? A. That involves the giving of an opinion upon a question of law which I have not as yet considered, the question as to how far we might be authorized to change the present plan of construction which has been assented to by the city and certain city officers.
- Q. I do not see how it has assented to it? A. You have not come to that point yet.
- Q. All right; but supposing the commission had adopted an elevated railway system as it did a subway, and had asked the people to vote upon the question precisely as they did ask them to vote upon this scheme, giving the same notice and publicity of the notice that the commission contemplated an entire change, do you think, then, the commission on that vote under this act would have been empowered to build a subway road? A. You mean, if the plan adopted prior to the election had been the plan of an elevated road?

- Q. Yes. A. I do think they would have been authorized to change afterwards and build a subway road; I think, under the act, there would be no question but what they would.
- Q. Which might cost a great many times what the elevated system would? A. The law under the vote was taken, provided the cost shall not exceed \$50,000,000, unless the Legislature should thereafter authorize an increased amount; the question of cost did not enter into the question at all, provided the cost was within the extreme limit fixed by the act.
- Q. Now, Mr. Delafield, why would not it have been better to have simply submitted the question to the people of the city, "Shall we authorize this rapid transit commission to build for and on behalf of the city, out of the funds of the city, a rapid transit railway?" A. The rapid transit has had no such authority.
- Q. I know they did not, but they would if the law had made that provision? A. I presume so.
- Q. But here is a statute which authorizes the commission to put the people in position to vote on one question, and as soon as they voted for it, to entirely change the plans and adopt the system that possibly the people might have voted against? A. The people were not called upon to vote upon any particular system or method of construction.
- Q. But the statute says you must adopt it, even to details of construction, before you submit the question to the people? A. That is true.
- Q. But the statute also provided, in the case of an affirmative vote, the commission be empowered to make such changes; and everyone who cast his ballot cast it with full knowledge of the law. A. You have interrupted the continuity of my narrative somewhat; I merely wanted to make one remark, that the board believed it was important to submit the question to a popular vote at the earliest possible moment; between June 8th, at the time of the organization of the board, and the time of the next general election, there was no time to give special consideration to a question of such vast importance, nor would it have been possible if they desired to adopt a new plan to have fully examined it in time

for that reason to obtain a vote at the earliest possible moment; that was the reason they adopted the plans of the old board; but the board explained fully their intention to make such changes after the election as they saw fit.

- Q. Of course, that condition of things did not leave the people any definite plan to vote upon? A. I think your conclusion is correct.
- Q. They did not know whether they were voting upon a subway line of road or an elevated railroad system? A. They did not know whether the rapid transit road to be constructed under their vote would be one class or the other; that is undoubtedly true.
- Q. Do you believe the statute ought to call for a vote upon a question of that magnitude that is so indefinite? A. I am not prepared to criticise the wisdom of the Legislature which passed the statute; the question was really a question upon the adoption of a policy new in the State of New York; upon the question of municipal construction; the question of construction was left to the hands of the experts.
- Q. Very true; why not have the statute leave it there? A. It did.
- Q. Then why go through this farce for one scheme? A. Your question involves the assumption they voted for a given scheme, which they did not; they voted on the question of adopting the policy of municipal construction.
- Q. I want simply to get what information on this I can, and I do not want my inquiry to be understood as criticism; but is it the opinion of yourself and the counsel of the commission that, while the statute requires the adoption of a general scheme and the preparation of plans on that scheme and the adoption of all the details of construction shall all take place before a vote is had, and the moment that that vote is had and a majority of votes secured in favor of it, that the commission is then under this statute authorized to change all the plans, or adopt a system that will double or triple the expense of the system? A. I will answer the question by reading the section of the law.

- Q. I remember you read the section which gave them full power to change. A. Such is my opinion, and such is the specific provision of the act.
- Q. There may be a good deal of question about that? A. I think there can be none.
 - Q. Construing the entire act together? A. I think not.
- Q. But that was what was done? A. Mr. Inman points out that there has been no proposition and nothing has been done actually which would involve any large increase of the cost; that the plans adopted by the old board and upon which, on your theory, the vote was taken, was quite as costly as the plans framed by the new.
- Q. Oh, yes; I was not assuming that; I was just assuming what might occur, if they saw fit to do so; you see all it involves while your statute limits the cost to a \$50,000,000; you expend the \$50,000,000, and if you do not get above Bleecker street you go to the Legislature again; that must follow as a matter of course? A. I have heard that argument advanced in the newspapers; it must be assumed that the board, which are experts on that subject, will so frame their law that that will not occur.
- Q. I put that extreme case, but you can not look through the island 20 or 30 feet below the surface? A. Our engineers have made borings in every block intersected by the railroad.
- Q. Still they may be met by conditions they do not foresee? A. I am told by the engineers that that is quite possible.
- Q. That it will enhance the cost quite materially? A. When the contract for the construction of this work is once let, the contractor is bound to perform the work for the stipulated sum, and no blunder of the contractor will enhance the cost to the city.
- Q. Provided he finishes the work? A. He will be under heavy bonds.
- Q. We have had some experience in the past in some cases; now, Mr. Delafield, the plan which the commission adopted, being the plan of the old commission, was a subsurface road? A. Yes; I think at some points it came out on a viaduct.

- Q. The general scheme was a subsurface road? A. In the lower part of the city it was a subsurface road.
- Q. Extending from what point to what point; that is, practically, Mr. Delafield? A. It commences at the South ferry, and my impression is that the old plan reached the city limits on both sides of the city; I know it did on the west side; it did also on the east side, but the easterly extension north of Forty-third street was cut off by act of the Legislature, although the easterly provided terminus from the corner of Madison avenue and Forty-third street—
- Q. It contemplated starting from the battery and northerly along Broadway? A. The westerly line followed Broadway.
- Q. They branched where? A. I think the branch was at Fourteenth street under the old plan.
 - Q. Fourteenth street? A. Yes, sir.
- Q. Now, what system has been adopted by the commission since then? A. After the popular vote the commission studied the whole subject, and has adopted a general plan which is embraced in the report to the common council, which I would like to submit as an exhibit, if I may do so.
- Q. Yes, sir; I would be very glad to have you do so. A. It is suggested to me that I point out to the committee that while the plan adopted by the new board differs in detail, especially in matters of engineering detail, from the plan adopted by the old, still the route is substantially identical and the method of construction is very similar in each case, so that the road now proposed is quite similar to the plan which had been adopted by the old board prior to the election of 1894; of course, the engineer can explain the exact point.
- Q. It is a subsurface road, is it? A. Yes; with viaducts at certain points where the topography of the city calls for it.
- Q. What power is contemplated? A. The general plan of construction provides that some power shall be used which shall not involve combustion within the tunnel; as a practical —
- Q. That precludes the use of steam power? A. Yes; that excludes steam power.

- Q. It must be electric power? A. It might be a cable; in point of fact, it probably is electricity.
- Q. You say you have the plans? A. I have the reports to the common council which contain the general plan of construction and the route.
- Q. Just have the stenographer mark it as an exhibit; what is the cost of it? A. I shall have to refer you to the engineer; it is less than \$50,000,000, but the exact figures I am unable to give.

(Report to the common council marked as an exhibit in the case.)

Q. Now, after this popular vote, did your commission look into other systems? A. Prior to the popular vote; in the summer of 1894 the commission sent its chief engineer, Mr. Parsons, to Europe, to investigate the system of rapid transit in foreign cities, and he made an elaborate report; a very large amount of valuable information had been accumulated by the old board; that, of course, was at the disposition of the new board; during the summer of 1894 the present board sent its chief engineer, Mr. Parsons, to Europe, to make a careful study of the systems of rapid transit in use in various cities of Great Britain and Europe, and he made a very elaborate engineering report upon many of these cities, concerning which Dr. Shaw spoke to you the other day; I submit that report as an exhibit; since that time the engineer has been engaged in the investigation of rapid transit systems in this country.

(Report on the European systems marked as an exhibit in the case.)

- Q. Outside of the investigation of the chief engineer and the reports of his, has the commission itself or the members of the commission, to your knowledge, taken up the study of various systems of rapid transit here? A. I think that all of the commissioners have made a pretty careful examination of that question; I did, as careful an examination as could be made by gentlemen who are not engineers; I know that all of them seem to be thoroughly familiar with the literature on the subject.
- Q. The work of constructing this road under the plan adopted by your commission has not been commenced yet, has it? A. Not as yet.

- Q. Did you put up the work and ask for bids? A. No; we have not reached the point yet by which under the law we can do so.
 - Q. And there has been no requests for bids? A. No, sir.
- Q. How was it under the old plan? A. The franchise favored by the old board was offered to bidders; you understand, under the old law, the bidder purchased the franchise out and out, subject to severe restrictions, and to construct the road under its own expense.
- Q. That received no bids? A. No; there was one bid, but it was not regarded as made in good faith.
- Q. How long ago did you have the plans which you have adopted, actually adopted by the commission? A. The general plan of construction and the route were formally adopted by the commission on May 9, 1895; Mr. Wade, if you care to turn to page 5 you will see the duties incumbent upon the board after the adoption of the plan; it is page 5, section 5.
- Q. Was this submitted to the common council as provided by section 5? A. After the adoption of a general plan of a route it was at once submitted to the common council and received the approval of that body; it was also submitted to the park commissioners, and to the commissioner of street improvements in the twenty-third and twenty-fourth wards, and received the approval of the board and that officer.
- Q. Mr. Delafield, that section provides that at a certain stage of the proceedings you shall proceed to obtain consents? A. It does.
- Q. Has that been commenced? A. After obtaining the consents of the various local authorities as required by the act, application was made to the property owners for their consent; their consent was withheld; application was then made to the General Term of the Supreme Court for its substituted consent; upon the preliminary hearing the court held it was ousted from all jurisdiction under the new constitution; that it should be made to the Appellate Division of the Supreme Court; an appeal was taken by our counsel from that decision of the General Term, and the Court of Appeals held that until January 1, 1896, the General Term of the Su-

preme Court would retain its authority under the constitutional provision to give a substituted consent; application for the appointment of commissioners was then renewed, and the order has been entered appointing commissioners.

Q. Will you step aside, Mr. Delafield, Mr. Inman wants to go and I will ask him a few questions.

John H. Inman, called and sworn, testified:

By Mr. Wade:

- Q. Mr. Inman, you are one of the commissioners? A. Yes, sir.
- Q. One of the Rapid Transit Commissioners? A. Yes.
- Q. And have been acting in that capacity about how long? A. First, from 1891 to 1894; then an interim of about a month I was out, and then since June 1894, to the present time.
- Q. During that time have you given the subject of transit in the cities much consideration? A. I have this rapid transit in New York city; not in other cities.
- Q. What is your opinion upon the question of municipal ownership of the railroads in the various cities in the State, if you have given that subject any conisderation? A. I do not favor it at all, except perhaps in a large enterprise of this character which private capital hesitates to undertake; generally speaking, I do not favor municipal ownership of property of that character.
- Q. Here in the city you favor the construction of an elevated transit railway system by the city? A. Well, the law is indicated and we are here to undertake to carry it out, and I propose to carry out the law as near as I can.
- Q. You told me you had very decided views upon the question of municipal ownership? A. More particularly State ownership; municipal or State either; I do not favor it at all; I think, except occasionally large enterprises like this is which private capital will not take up; there is quite a history.
- Q. Would you, if you had the framing of the law, yourself, create a law authorizing or directing the city of New York as a municipal corporation to construct a sub-surface railroad and equip it for the purpose of obtaining rapid transit? Yes; I think

I would support just such a law as we have now for the construction of an underground railroad.

- Q. Would you have the city operate a road as a municipality? A. No, sir; I would not.
- Q. You would lease it to some corporation? A. The same as this law is; this can not be built except it is afterwards leased; you are only inquiring about street railroads and not railroads in general?
 - Q. No; surface street railroads and elevated railroads? A. What we ought to do is to go on here and have this elevated railroad improved; the commissioners are prepared to grant it; we are prepared to give them all the privileges that are necessary as far as three tracks and such things are concerned.
 - Q. Is the commission authorized to treat with the elevated railroads upon that question? A. Not unless the elevated railroad makes an application.
 - Q. Assuming they do? A. Yes.
 - Q. You have full power to get together A. Not only power, but disposition.
 - Q. So your commission stands here ready to-day to give any reasonable consent to these elevated roads for the purpose of securing rapid transit to the people? A. I do, and I believe the balance do; I spoke for myself and I have clear ideas about it; it has not made any application to us.
 - Q. What system do you think should be adopted by the elevated roads? A. What do you mean?
 - Q. What should be done to insure rapid transit? A. You should either have third or fourth tracks on the Third avenue to Chatham square; Ninth avenue, third track down as far as Eighth, and possibly fourth track some part of it; from foot of West Broadway we should have extension to Fulton street ferry so passengers coming across that side can walk across the bridge and take the boat and get right into a car and go to any part of the city on either line of the road; there are some other things the commissioners are prepared to grant if there is any application; I think the elevated railroad authorities know about it; they have talked

it informally, and they make no show of improving it whatsoever; it will take five or six years to establish the underground railroads; the commission have pretty full authority to make any improvement as far as extension of line or any such thing; we have nothing to do with rolling stock

- Q. Does your scheme involve the equipment of the road by the city? A. No, sir; the party who leases it equips it.
- Q. You furnish track, power and everything except the trains or cars? A. That is fully laid out in the law; I am not prepared to answer those questions; all the details are fully laid out in the law.
- Q. Do you think the fact that you have in contemplation the construction of a sub-surface road here which you think would take four or five years to complete, retards improvement of the elevated railroad system? A. I have no knowledge about that; I am not operating the lines of the elevated people; I do not know how they look at it; I do not think it should have; reference has been made to certain extensions of the Yonkers lines which was talked in the commission three years ago; those extensions are wholly impracticable; some commissioners advocate the elevated system being brought to the Yonkers line; I have seen too many extensions built where there was no population; there is none beyond Yonkers to furnish traffic; there is no reason why these people should not build to Fort Washington and give additional tracks, and also build down to Chatham Square; I do not see how the underground road will interfere in five or six years.
- Q. What railroad runs to this ferry, to the Cortland street? A. None now; if I had a map I could show you.
- Q. Indicate what it is? A. This road comes to the foot of West Broadway
 - Q. I mean what railroad? A. Oh; on the other side.
- Q. The Pennsylvania? A. Yes; on the other side; I am believer in consolidation and I am a believer in cities and munitipalities not owning railroad properties.
- Q. You believe the system of railroads can be better managed and better service given to the people if practically under one management? A. Yes, sir.

Q. And by that method give cheaper fare to the patrons of the road? A. Yes, sir; because there is less expense to the operation.

Q. We have seen it in certain railroads through the State five or six years ago— A. There was two railroads, the New York Central and West Shore; you have better greight service now and better passenger service than five or six years ago; this underground railroad could never be consolidated because it is city ownership; if it was all under one ownership it would be better for the public; you asked about the rapid transit commission; we worked two or three years, and in 1893 we put it up for auction and it did not sell; then R. T. Wilson, whom I have known since a boy - and he is able to back if - made this proposition, that he spend \$15,000,000, and if the road cost \$45,000,000, that he would spend \$15,000,000, he and his associates; if it cost \$45,000,000 the State should lend its credit, but it was to have the first lien on the property; if it cost more than \$45,000,000 he would spend the next \$15,000,000, and the city to have the first lien; we took this up and considered it - I speak as a commission; the Chamber of Commerce is a large body, and I happened to be on the executive committee for a while, and it was put before the Chamber of Commerce at a largely attended meeting, to get the opinion of the members of the committee; Mr. Wilson never made the proposition in writing, but made it in such shape that bona fide and good; there was Cornelius Bliss, John M. Stewart and some other gentlemen - I do not recall the names; it is all on the record in the Chamber of Commerce books — they reported back in about 30 days, and the Chamber of Commerce unanimously supported it, that Mr. Wilson should spend the first \$15,000,000; and he agreed to spend the first \$5,000,000 before he asked the city for a penny; he would expend the first \$5,000,000 from the Battery to Broadway which I considered as an important test, because if he struck quick sand he would expend his \$5,000,000 and the city not a cent; this committee came back and recommended unanimously to the Chamber, and I thought it was to be shaped in a law; Mr. Hewitt stated that was not the thing to do, but the

thing to do was the city should build it itself and practically proposed this law you have got now; Mr. Hewitt talked and I talked and it is all in the records and some fellow that lived in Jersey, who does not pay taxes in New York, he says, let's build the road and let our children own it — he does not own property here — he says, let's go to Albany; in accordance with the Wilson bill there would have to have been a constitutional act permitting the city to build it; the Constitutional Convention was coming within three or four months and the general plan was to get the consent of it, to get the consent to lend \$30,000,000 or thereabouts to get the thing transacted; I think if the people are tired of this the commissioners will retire any time; we have served three or four years; the last bill was intended to give us \$6,250 apiece for the last three years; the last year we have got nothing, and are not expecting to, so far as I am concerned, and we are trying to undertake to carry out the law honestly as it stands; I am willing to quit and I think the commission are; is there anything else you desire to ask.

Q. I think that is all; we are very much obliged to you.

Lewis L. Delafield, recalled, testified:

By Mr. Wade:

A. As supplementary to the testimony given by Mr. Inman it may be well to call attention to the provision of the law under which additional franchises may be given; shall I read or refer you to the passage; there are certain provisos and conditions attached to it.

Q. State them. A. Section 34. In case the people shall determine by vote as hereinafter provided in sections 12 and 13 of this act that any such railway or railways shall be constructed for and at the expense of such city, then and in that event it shall be the duty of said board to consider the routes, plans and specifications, if any, previously laid out and adopted by their or their predecessors, and for which the consents have been obtained referred to

in section 5 of this act; and either to proceed with the construction of such railway or railways, and provide for the operation of the same, as hereinafter provided, or to change and modify the said routes, plans or specifications in such particulars as to said board may seem to be desirable, or to adopt other or different routes, plans and specifications for such railway or railways, provided, always in that in all cases in which any such change or modification shall be of such a character as to require the consents thereto referred to in section 5 of this act, and in all cases where other or different routes and plans may have been so adopted the said board shall proceed to secure the consents so required to be obtained by section 5 of this act as therein set forth. As soon as such consents, where necessary, shall have been obtained, and the detailed plans and specifications have been prepared as provided in section 6 of this act, for and in behalf of said city, shall enter into a contract with any person, form or corporation, which in the opinion of said board shall be best qualified to fulfill and carry out said contract, for the construction of such road or roads, upon the routes and in acordance with the plans and specifications so adopted, for such sum or sums of money, to be raised and paid out of the treasury of said city, as hereinafter provided, and on such terms and conditions, not inconsistent with the aforesaid plans and specifications, as said board shall determine to be best for the public interests. And said board may contract the construction of the whole road, or all the roads provided for by the aforesaid plans in a single contract, or may be separate contracts, executed from time to time, provide for the construction of parts of said road or roads as the necessities of said city and the increase of its population may in the judgment of said board require; such contract shall also provide that the person so contracting to construct said road or roads shall, at his own cost and expense, equip, maintain and operate said road or roads for a term of years to be specified in said contract, not less than 35 nor more than 50 years, and upon such terms and conditions as to the rates of fare to be charged and the character of service to be furnished and otherwise as said board shall deem to

be best suited to the public interests, and subject to such public supervision and to such conditions, regulations and requirements as may be determined upon by said board. Such contract shall further provide that the person, firm or corporation so contracting to construct, maintain and operate said road shall annually pay into the treasury of said city, as rental for the use of said road, a sum to be specified in said contract, which shall not be less than the annual interest upon the bonds to be issued by said city for the construction of said road as hereinafter provided for, and a sum, in addition to said interest, not less than one per centum per annum upon the whole amount of said bonds. The aforesaid annual rental shall be paid at such times during each year as said board shall require, and shall be applied first to the payment of the interest on said bonds as the same shall accrue and fall due, and the remainder of said rental not required for the payment of said interest, shall be paid into the sinking fund, for the payment of the city debt, if there shall be such sinking fund in said city, or, if there be none such, then said balance of said rental shall be securely invested, and with the annual accretions of interest the feon, shall constitute a sinking fund for the payment and redemption at maturity of the bonds issued, as hereinafter pro-Said contract may also provide for a renewal or renewals of the lease of said road upon the expiration of the original term and of any renewals of the same upon such terms and conditions as to said board may seem just and proper, and may also contain provisions for the valuation of the whole or a part of the property of said contracting person, firm or corporation, employed in and about the equipment, maintenance and operation of said road, and for the purchase of the same by the city, at such valuation, or a percentage of the same, should said lease not be so renewed at any time. Said contract may provide for the construction of said road in sections, and in all cases shall specify when the construction of said road or sections of the same shall be commenced, and in each case the date of completion. It shall also state the date on which the operation of the road, or any section thereof, shall commence. The person, firm or corporation so con-

tracting for the construction, equipment, maintenance and operation of said road shall give a bond to said city, in such amount as said board of rapid transit railroad commissioners shall require, and with sureties to be approved by said board, who shall justify in the aggregate double the amount of said bond. Said bond shall be a continuing security, and shall provide for the prompt payment by said contracting person, firm or corporation, of the amount of annual rental specified in the aforesaid contract, and also for the faithful performance by said contracting persons, firm or corporation of all the conditions, covenants and requirements specified and provided for in said contract. The said contracting person, firm or corporation shall also, simultaneously with the execution and delivery of said contract, deposit with the comptroller or other chief financial officer of such city the sum of \$1,000,000 as further security for the faitful performance by such contracting person, firm or corporation of all the covenants, conditions and requirements specified and provided for in said contract relating to the construction and equipment of said road, and the city in and for which said road shall be constructed shall also have a first lien upon the rolling stock and other property of said contracting person, firm or corporation, constituting the equipment of said road and used or intended for use in the maintenance and operation of the same, as further security for the faithful performance by such contracting person, firm or corporation of the covenant, conditions and agreements of said contract on his part, their or its part, to be fulfilled and performed; and in the case of the breach of any such covenant, condition and agreement said lien shall be subject to foreclosure by action, at the suit of such city, in the same manner, as far as may be, as is then provided by law in the case of foreclosure by action of mortgages on real estate. The said board of rapid transit railroad commissioners may, however, from time to time, by a concurrent vote of all the members of said board, relieve upon such lien any of the property to which the same may attach, upon receiving additional security which may be deemed by said board so voting to be the equivalent of that which it is proposed to release, and otherwise

upon such terms as to such board so voting shall seem just. the completion of the construction and equipment of said road to the satisfaction of said board, and when the operation of the same shall have commenced pursuant to said contract, it shall be the duty of the comptroller or other chief financial officer to pay to the said contracting person, firm or corporation said sum of \$1,000,000 so to be deposited as above provided, and said contracting person, firm or corporation shall also be then entitled to be credited upon the rental which he, they or it shall have contracted to pay to said city for the use of said road a sum which shall be equal to the interest on the sum of \$1,000,000 for the time of such deposit, at the rate of interest provided for in the bonds which shall have been issued and sold by the city to provide for the construction of The said contract shall further provide that in case of default in paying the annual sum or rental provided for, or in case of the failure or neglect on the part of said contracting person, firm or corporation faithfully to observe, keep and fulfill the conditions, obligations and requirements of said contract, the said city, by its board of rapid transit railroad commissioners, may take possession of said road and the equipment thereof, and as the agent of said contracting person, firm or corporation, either maintain and operate said road, or enter into a contract with some other person, firm or corporation for the maintenance and operation thereof, retaining out of the proceeds of such operation, after the payment of the necessary expenses of operation and maintenance, the annual rental hereinbefore referred to, and paying over the balance, if any, to the person, firm or corporation with whom the first contract above mentioned was made; and if such proceeds of the operation of said-road, after the payment of the necessary expenses of maintenance and operation, including the keeping in repair of the rolling stock and other equipment, shall, in any year, be less than the annual rental hereinbefore referred to and provided in the first contract, then, and in that case, the said contracting person, firm or corporation and his or its bondsmen shall be and continue jointly and severally liable to the aforesaid city for the amount of such deficiency until the end of the full term for which the said first contract was originally made. No contract entered into under authority of this act shall be assigned without the written consent of the board of rapid transit railroad commissioners, concurred in by all the members of said board.

- Q. How much have the commission expended since the act of 1894? A. I have not the book of account here to give the exact figures.
- Q. Substantially the amount? A. The total amount appropriated to the committee, \$61,775.86.
- Q. Under the act of 1894? A. Under the act of 1894, for the present board; the total amount expended has been somewhere between \$56,000 and \$59,000.
- Q. That covered the total expense? A. Yes, sir; oh, there are some expenses incurred at the present time for which no appropriations have been made; I assume the total liabilities incurred is in the nature of \$65,000 at the present time.
- Q. Are you familiar with the plans at one time presented by Marvin Smith for rapid transit here? A. I have no familiariy with the plans any further than hearing Mr. Smith address the commission on that subject.
- Q. Do you know the system at one time suggested by Jay Gould? A. I do not.

William Steinway, called and sworn, testified:

By Mr. Wade:

- Q. What is your first name? A. William Steinway.
- Q. You reside in the city of New York? A. I do.
- Q. You are one of the rapid transit commissioners? A. I have been ever since April, 1890.
- Q. And are you familiar with the proceedings of the commission? A. Ever since that time.
- Q. And all the plans and suggestions that have been brought before it? A. Yes; thoroughly.
- Q. And you are familiar with the plans adopted by the commission under this statute of 1894? A. I am; thoroughly.

- Q. Mr. Steinway, independent of the statute creating the commission, what is your own personal opinion of the advisability of the city of New York constructing a railroad? A. I think that this last law is a wise one, the wisest one of all of them, for this reason, that under it, after all the legal difficulties, the constitutionality and so forth shall have been decided, the corporation to whom, under the act, the franchise and the subsurface way will be leased, leaving to the new corporation all the equipment, including the rails, to be found, is the wisest one and will act very much better as the city now leases its ferries; under it, it is my firm belief that within one-half the time the city will have its money back by the increased taxation; in about forty years, as well as I could cipher it out, the city will own that magnificent subway, which will build it up and out without having cost a cent.
- Q. That is, the rentals you get? A. Yes; and there is a provision in this for a sinking fund of 1 per cent.; now, the city can sell its bonds at 3 per cent. easy; there is a great dearth of good bonds at the present time; the structure will not cost \$50,000,000, for, as the commission have worked upon the details, a great many difficulties have been overcome; it will not cost as much money as at the first glance it appeared to be; the commission, consisting of experienced men of mature age, who have lived here all their lives, all large taxpayers and of large interests, will do their best; that those able and honest men will do, together with the comptroller and mayor, to guard the city's interest in every instance; they will put the bidder under heavy bonds, with cash bonds of \$1,000-000, to build the plans, withholding a certain percentage; that is, the work must be a certain percentage in advance of the money they receive, so absolutely the city's interest will be guarded; they will always keep back a certain percentage; and it is my firm belief that this is one of the greatest things the city has ever done; I would, of course, be entirely opposed to any municipal operation, because it would be a huge, unwieldly affair, if politics could not be kept out of it, and keep inefficient men in there; but the building of it and owning the structure, and having within forty years not having expended a dollar - in other words, they will get the

entire thing for nothing within forty years; it will work as the fourth tunnel did; I remember the great opposition; it was called the death of the avenue; finally, after a great deal of trouble, the Legislature passed, in 1872, the provision for the sinking of the work—

- Q. That is the New York Central? A. Yes; it was built in the most substantial way—
- Q. They are now elevating it? A. That is above Ninety-eighth street; this was the sinking of the work from Forty-second to Ninety-eighth street; within five years the \$6,500,000 paid by the city had been made by the city clean in increased taxation, and now the entire avenue is built up by magnificent structures and the city has had a large income; it is my firm belief, gentlemen of the committee, that when all the legal difficulties are overcome—when properly built—it will prove the same great advantage to the city, in a large way, as that did in a comparatively small way.
- Q. What is your opinion upon the subject of municipal ownership of railways in general? A. I would be entirely opposed to it; I think it would be a huge political machine and refuge for old political hacks not good for anything, and be such a huge, unwieldy machine and would make no money; the operation of these things should be always left to private enterprise, where the city's interest is properly guarded.
- Q. You think that all the business should be carried on by private enterprise, and that it can as well be done in that manner? A. It could be better done; I know what the management of street railways is; I have owned one in Long Island City for many years; it was a monopoly, and monopolized from way back; after holding it for thirteen years, and losing \$250,000, now when the population is greater, and electricity has reduced expenses, it is a god-send to the public and pays very handsomely now.
- Q. What road is that? A. The Long Island City; the combined street railroad.
- Q. Your experience with street railroads enables you to speak upon that subject? A. Yes, I stated it from actual experience.

- Q. It is not entirely a joke to operate a street railroad? A. No, it is not; especially where the population is scattered.
- Q. Is it your experience that you find a good many good business men in business enterprises that are failures in the operation of a transportation company? A. They are generally a failure in all the sparsely inhabited sections of the city; I remember when the Third Avenue Railroad was built in 1852, and I know about 1854 the stock sold at 13 in the market, and the bonds could not be placed, and only through the event that the up-town district became populated, they made money, but that took seven or eight years before they did so.
- Q. Are you familiar with the plan which Mr. Melvin Smith at one time presented? A. Thoroughly.
- Q. How nearly does the present plan approach that? A. It approaches it in the following way: The old Arcade plan was a design to tunnel Broadway and make a second street underneath; unfortunately at that time electricity had not made the stride it has within half a dozen years, and it was intended to run it by steam locomotive, making it absolutely impossible to proceed, in my opinion; I have given this matter thorough study in the cities of Europe; we all remember the Fourth avenue tunnel, when they run in nothing but smoke and cinders; the London Avenue Railroad, in the heart of its business, has never paid, but the new system, which starts from the monuments and goes under the Thames river to Suffolk, 31 miles long-I have been a dozen times on the trains and found that they made 3½ miles, with five stops, and being 95 feet under the ground, and under the bed of the river Thames, in fourteen minutes; and although it is comparatively a plaything, the iron tunnels put under partially from the outside being but 9 feet 4 inches in diameter, yet they were crowded from morning until night, and the only bad thing about it was the elevators, being 95 feet down; and I went morning and evening, when the workingmen came, and I found the elevators taking but 50 people when 150 wanted to go; the young and active would get there first; the old and decrepid and children were left, and the next train was upon them; so I have been opposed to a deep tunnel

in the city here. To return to the Arcade Railroad; at that time there were no cars or cable roads on Broadway; they intended to go from house line to house line and make that a double street, and come directly under the pavement; the French capitalists laid the plans before our commission; theentire capital stock had been subscribed in France, but litigation begun, and in 1889 the Court of Appeals decided on a mere technicality, because the title did not sufficiently express the purpose of the railroad, it was unconstitutional, and, therefore, ought to be rejected; we have looked at those plans, and they have been of great service to the commission; now, with the advent of electricity, where great speed can be made, and ventilation made perfect and be as light as day, this commission is going to construct its tunnel on Broadway, from the Battery, to be directly under the foot of the cable cavity, perhaps 5 to 6 feet; there are no real sewers on Broadway, and the great trouble was only the water pipe and the subways, etc.; from the Battery way up to Thirty-third street, where Broadway widens to 100 feet, this system will be about 5 or 10 feet, the roof of the tunnel under ground; the road will be 5 or 6 feet under the pavement, and it will be, in one respect, a perfect Godsend to the city, because millions of dollars will be spent for the benefit of the city; and larger water supplies; the same of superfluous gas-pipes laid by the different gas companies formerly, and now served by the consolidated gas company, will be eliminated and made perfect; the water supply, which is run at the present time at low pressure below Houston street, will be made adequate to the wants of these great structures put up everywhere; so that while this is being built millions will be expended, practically, for the benefit of the city.

- Q. By other corporations? A. Yes.
- Q. And by the city? A. Yes, sir; and which will ultimately have to be paid by the lessee; then above Fifty-ninth street the superstructure will come immediately under the pavement; we will take the west side; the Boulevard, from Fifty-ninth street, is 150 feet yide; the sidewalk either side is 20 feet, under which are located the sewers and water pipes; so the street bed is 110

feet way out to the city line, free, and may never be disturbed; it is intended to build this structure directly under the pavement, and it can be beautifully ventilated and as light as day through small openings, which are right in the center of the Boulevard from one end to the other; take the East Side, it will be 8 or 9 feet, branching out at Fourteenth street, with four tracks, up Fourth avenue, and a station right under the Grand Central depot; you may have noticed we have already commenced conferences with the postmasters and mail authorities, not only for local service, but the entire eastern and western mail; and a great deal of time will be saved, because the tunnel will be built so the mail cars can be run directly to the post-office; we are conferring together; it will take some time, but we hope to be ready by the time the legal difficulties are over, so by the first or middle of February to have everything ready; then, out at Fourth avenue, beyond Forty-sixth street, it will be immediately under the pavement, there being no sewers on Fourth avenue at all, and run to Ninety-eighth street, and from there out to One Hundred and Thirty-eighth street, to the Harlem river, it will be an elevated road; it will also, on the West Side, by a little over half a mile be an elevated road; three-quarters of a mile from One Hundred and Twentieth to One Hundred and Thirty-fourth street, where the deep gulf is; it wll there be 54 feet hgh in the center.

Q. Now, Mr. Steinway, it is your opinion that this whole thing is feasible and practicable? A. It is my firm opinion, gentlemen of the committee, having studied it up for the past six years, having been on the first commission, and, of course, having closely studied it; and besides I am somewhat of an engineer, as we have our own iron works, and I know the power of iron under a crushing as well as any engineer; I have been in the city of Berlin, where I have given that road close study, the viaduct road; I have been in Paris, and I have been in London, on both of the underground roads, and it is my firm belief that all the physical questions have been fully met and overcome—that the thing is perfectly feasible, and that if there is no legal difficulty, the whole thing can be constructed within three years from the time we

start; for this reason, it can be attacked in 100 different places at once.

- Q. Do you think you can run a train more rapidly from the Battery to One Hundred and Fifty-ninth street by a sub-way road than an elevated road, and make the same number of stops? A. Most assuredly; for the following reason: The great prejudice against tunnels is based, even with the most intelligent people, upon the fact that they have been in tunnels and met with stifling atmosphere; the elevated roads, which have been a God-send to the people—the elevated roads have made up-town in New York what it is to-day, and should be encouraged; that is not only my opinion but the opinion of my colleagues; now, to get to the tunnel; on a firm foundation, with steel rails 95 pounds to the yard, and there being no heavy grades—remember the express trains are independent of local ones—the express trains will not have a grade of over $1\frac{1}{2}$ feet to the 100.
- Q. Is that part under the contract? A. By the center tracks being independent, and where we do not connect with local trains we are independent of the height of it the result is that the express trains of eight cars can make that speed unretarded by frequent stops or heavy grades; now, remember, sleet, snow, ice, rain or fog does not enter into any underground road, and it enters very badly in the elevated roads because I have myself been caught several hours in the fog and rain.
- Q. You propose to secure rapid transit by express trains and with few stops? A. Yes; our plan, figured out, will be from the City Hall to Forty-second street, the time for the express train will be nine minutes; to One Hundred and Twenty-fifth street the time will be sixteen minutes; you can travel easily and comfortably with the utmost safety, and with greater comfort, entirely independent of the state of the weather, and cooler in the summer and warmer in the winter, splendidly ventilated and as light as day; lit by electricity; it is not a misty view, but based on hard study.
- Q. You think such a road will be in favor by the people? A. I believe when it is finished that plenty will prefer it; there will

be greater comfort and nowhere will they have higher stairs to climb than 18 feet, which means 16 feet to the platform, but the general plan will be 11, 12 or 13 feet to the platform of these steps.

Q. Unless there is something you wish to speak about, that is all? A. I would, perhaps, of the system; I want to amend two or three things in Mr. Delafield's testimony, who, only having been with the commission a year and a half, does not of his own knowledge know the former ideas; in the first place I will say the first commission attacking the question of rapid transit were appointed under the act of 1875 in April, 1890, by Mayor Grant; they consisted of August Belmont, O. B. Potter, John H. Starin, Woodward Landon and William Steinway; we found that almost every street that we could touch had been greatly restricted; suddenly we struck an iceberg that stopped the commission going any further, viz., Forty-second street had been exempted by the Legislature who said that there shall be no road upon, over or under Fortysecond street; in 1881, in the codification of these laws, some one had succeeded in putting in one phrase "or across Forty-second street," which stopped us; it resulted in the act of 1891, under which the mayor appointed a new commission; Mr. Belmont having died in 1890, in November, it consisted of John.H. Starin, John H. Inman, William Steinway, Julian Elber and Samuel Spencer; that commission finally decided after considering the viaduct plan and the elevated plan — we were overground people — we found that going through the blocks that the expense was so enormous that it would entail \$150,000,000 and 15 years of litigation, and we finally struck, as the only feasible way, the underground road under Broadway; in the franchise, by the act of the Legislature, Madison avenue was left out of any underground or elevated road, so that we offered on the 22d of November, 1892, from the steps of the City Hall, the commission named by law offered the franchise, but the act made such iron clad conditions, and it was on the eve of a panic with the immense gold shipment, that we failed to receive a substantial bid; we received one bid from an ambiguous gentleman who was then under supplementary proceedings against No. 98,7

him, and the commission very properly rejected his bid; the commission then opened negotiations with the elevated road; Jay Gould appeared himself before us and showed a most extraordinary intelligence and memory which I have hardly ever seen equaled; he gave us from memory for years, the receipts on the New York elevated roads of the stations, and made an impression on us that he was a man of most extraordinary ability; he then made an application to us for an elaborate increase of the elevated system going to the Brooklyn bridge and going up Canal street and so forth; that was all considered, and also four tracks on the Third avenue and Sixth avenue and so forth; in the winter of 1893, I was at the point of death by a heavy attack of inflammatory gout, and many of the sessions were held at my house; after the death of Jay Gould, Mr. George Gould attended; finally we hit upon an extension of their road, viz., by extending the Ninth avenue road out to Fort George; Mr. George Gould then and there positively refused to bind himself to extend that road, and even he refused, unless according to their showing the stock would earn four per cent.; he explained to us up to 1890 their extension on the west side had lost money; only in 1890 it comes to pay; no doubt every word he said was true; he refused to extend their track beyond One Hundred and Ninetieth street even a foot, unless they made four per cent. on the stock; we could not get him to consent that the city's interest should be guarded by giving the rapid transit commission a chance to satisfy themselves and not accept his statement; within 12 years they would not consent to extend the elevated railroad system beyond One Hundred and Twentyninth street unless they wanted to do it; negotiations were broken off; even since that time, Frank Thompson, President of the Pennsylvania road, has called on us personally and appeared before the commission very much urging that the elevated roads should have the privilege of extending from the foot of Cortland street ferry; we were perfectly willing to do it on a fair and reasonable basis; the rapid transit act provides that any rapid transit system wishing to have its system extended must make an application, and only then can the commission act; they have entirely failed to make such application; and I declare to-day as far as I know every one of the rapid transit commissioners always have been, and to-day are willing to entertain any reasonable application from the Manhattan Railway Company for the extension of their system which this commission deems in the interest of the public, and for which they agree to pay a fair and reasonable compensation to the city; they have wholly failed to make any such application.

- Q. Mr. Steinway, have you an opinion as to the best method of disposing of franchises to railway companies? A. The new franchises.
 - Q. Yes? A. Are you now speaking of the rapid transit system?
 - Q. Of any system?

By Mr. Nixon:

- Q. You just suggested you were willing, and you thought the board were, to give to the Manhattan Railway the right to extend its system; what is your individual judgment that the phrase "sufficient compensation," means? A. My idea would be this, based on my long experience as the unfortunate owner for many years of a railroad covering a sparsely inhabited section; I would do this, if the elevated railroad were compelled to-day to go to Yonkers — I will say the east side is fairly taken care of by the Suburban road; the west side is very sparsely populated, and therefore, I would say this, that to extend the road to King's bridge they should in the first place be exempted from taxation to that section and from paying anything for five years, and then on a rising — either by this commission or some other commission, perhaps a board of estimate or apportionment of the city — they should be made to pay as it becomes more valuable; it is impossible for them to extend into a wild country where they only have 50 people to the square mile; they would lose thousands of dollars every week.
- Q. What would be your idea of a position of this kind, for instance, on an extension: Say this agreement be entered into between some commission and the corporation, by which they should first be allowed to earn dividends of 8 per cent., and all sums

earned above that, one-half to be paid to the municipality and the other half to be paid to the railway corporation? A. If it could be made so that they are not the sole arbitrators of what they earn and do not earn; the city's interests should be guarded and not dependent on the statement of any one corporation; the city should be able to investigate.

- Q. Have the examination of the books left to some commission; provided the interests of the city are properly protected so far as the examination of the books and accounts are concerned? A. I think that would be fair.
- Q. Don't you think that would be better than selling for a lump sum? A. This would be on extensions.
 - Q. You referred to that as the Manhattan road? A. Yes.
- Q. I mean the sale of a franchise in a general way; you do not think it is fair to impose a payment upon a corporation until they earn a profit? A. I will say this: Take, for instance, our annexed district; it was annexed in 1874 and became part of the city; that part of the city has been suffering beyond all description for lack of facilities; that part of the country can not prosper unless transportation facilities be had; it is my idea the starting of companies should be facilitated, and it is unreasonable to ask that they, for ten years when they can not earn anything, be put under restrictions; as far as to the elevated road, there must be annual payments; they can not take a lump sum.
 - Q. Annual payments based on percentage? A. Yes.
- Q. A percentage or a fixed amount? A. The law leaves that somewhat with the commission, but I will state that the sum is fixed annually after they complete their system, and they must bind themselves within a certain number of years to build, say three to five years; the old commission which existed at the time prior to this last act, prior to 1893, had agreed on something like \$175,000 annual payment for which the commission was ready to give them any extension warranted by the requirements of the population, viz., to extend southerly and northerly and give them third and fourth tracks; they have never offered us anything; I know there were a great many discussions in our board; Mr. Starin insisted

on \$175,000, which he thought was very liberal, in view of a dozen years hence; they never made any offer of anything.

- Q. You practically never had any proposition from the Manhattan road so far as to extension? A. No, sir; except this application; when it came to a proposition we could not nail them to anything; I will say as early as 1866 the Senate of the State of New York ordered an investigating committee to look into the question of rapid transit, so this thing came about thirty years ago; I am familiar with the Beach tunnel and Vanderbee tunnel, and all these things, and especially with the Arcade plan; I will differ in one thing from what Mr. Delafield testified; he testified that the commission would have had the right where they submitted to the popular vote, say the referendum of the underground road, the commissioners would have the right to turn that into an elevated road; I am not aware of any such right; the questions you asked Mr. Delafield were very pertinent and we did submit, as I understand it, and I studied the question closely, to the electors to vote, not only upon municipal construction but upon the plan; certainly it was our moral obligation — I mean the commission — to build an underground railroad.
- Q. That was practically what you advocated? A. Yes, and where we stand to-day, and we have made only small local changes; for matter of safety, we have widened the tunnel somewhat, a slight diversion at the Battery, so as to avoid making a pumping station; we have practically the same plan, an improved plan with less cost.
- Q. The same general plan? A. Yes, and the same general route; we did not change the method at all; there is also another slight error that crept into Mr. Delafield's testimony; we never had to submit the detailed plans; we have not had to to-day; it was a general plan we submitted and on which the electors of New York city voted.

By Mr. Wade:

Q. You say it does not require you to submit — the statute requires you to submit it? A. Not the detailed plan; only the gen-

eral plan. Section 12, chapter 752, Rapid Transit Act, Laws of 1894, reads as follows:

"The said board of rapid transit railway commissioners shall cause the question, whether such railways shall be constructed by the city and at the public expense, to be submitted to the vote of the qualified electors of the city within which such railway or railways is or are to be constructed, and to that end it shall be the duty of the said board, after completion of the detailed plans and specifications, as required by the act hereby amended, at least thirty days prior to the next general election, to file with the public officer or officers, within the county in which such city is located, who may be charged with the duty of printing the ballots to be used at such election, a request that separate ballots be printed and supplied to such electors, one-half in number of which shall read: 'For municipal construction of rapid transit road,' and the other half in number of said ballots shall read, 'Against municipal construction of rapid transit road.' Upon such request being so filed, such ballots shall be printed and supplied to such electors at such general election, and separate ballot boxes shall be provided for the reception of the same in each election district within such city, and the provisions of chapter six hundred and eighty of the laws of eighteen hundred and ninety-two, entitled 'An act in relation to the elections, constituting chapter six of the genreal laws,' and any act or acts amendatory thereof or supplemental thereto shall apply thereto as far as the nature of the case may allow. No ballot which may be provided under this section shall be deemed invalid by reason of any error in dimensions, style of printing, or other formal defect, or through having been deposited in the wrong ballot box, but all of such ballots shall be canvassed and returned as if such formal defect had not existed, or as if they had been deposited in the box provided for the Upon the canvass of such votes by the board of county canvassers of the county in which such city is located, it shall be the duty of said board to file with the county clerk of said county a statement which shall declare the total number of votes cast in said city 'for municipal construction of rapid transit road,' and the total number so cast therein 'against municipal construction of rapid transit road.' And the said railway or railways shall be constructed by the said city and at the public expense, if it shall be found from such statements so filed that there is a majority of the votes so cast in favor of such municipal construction."

Q. So you see you can not, under that section, get in a position to request votes on that question until you have detailed plans.

A. The detailed plans would have been an impossibility, but reasonably possible —

By Mr. Nixon:

Q. You think the word "detailed" is subject to wide latitude?
A. Yes, sir.

By Mr. Wade:

- Q. Just note the reading of this: "After the completion of the detailed plans and specifications;" now, that does not leave much outside? A. Well, our counsel advised us that that meant the following: That of course the route must not be changed; it must not be widened; property owners must not be encroached upon any further; but slight details, such as the location of the stations, which was not a part of the general plan, for the grades of it, having it a foot or two higher as we would have to overcome certain grades; that that was not a thing that would jeopardize it in any shape; that it would be virtually tying the hands of the commission; there is another section allowing the commissioners to change details from time to time.
- Q. I would like to ask whether it is in the province of that commission to ask to construct a subway and then construct an elevated railroad? A. I am not a lawyer, and I do not propose to talk constitutional questions; when it comes to the mechanical part I am thoroughly posted.

No. 98.] 1355

William Barclay Parsons, called and sworn, testified:

By Mr. Wade:

- Q. You are the chief engineer of the New York Rapid Transit Commission? A. Yes, sir.
- Q. And have been in that position how long? A. Since the organization of the commission in June, 1894.
- Q. And have been at work upon its plans and specifications? A. Continuously since then, and previously to that, with the old commission.
- Q. And you are familiar with the plans and specifications adopted by the commission for the construction of a sub-surface railroad? A. I am.
- Q. In fact, made by you or under your supervision? A. They were.
- Q. Have you those in this printed pamphlet? A. I have; that printed pamphlet represents the general plan as adopted by the commission and approved by the common council, and there are the maps and specifications.
- Q. That is mapped to a scale? A. The scale is mentioned in all cases.

(Book received and marked in evidence.)

By Mr. Nixon:

- Q. These are practically your views and examination of this question, on this subject? A. Those are my views and examinations of systems of railroads other than the city of New York.
- Q. Of course, your examination was simply from an engineering standpoint; in your examination of transit in other cities did you go into the question of the financial part of it? A. I did; it is all in that report; the financial success of each railroad is there stated.
- Q. That will save us going into an examination of this subject.

By Mr. Wade.

- Q. If you have anything to submit, Mr. Parsons, we should be glad to hear from you? A. On the question of the practicability and desirability of an underground railroad I do not think there is or can be the slightest question; the commission of 1891, of which I was appointed chief engineer, went into this question very fully, and, as Mr. Steinway stated, they started in favor of a viaduct railroad; what they called a viaduct road was through the blocks, owning the line themselves; an elevated road; the most desirable streets are occupied by the Manhattan system; as regards the feasibility of the construction of this road the work as it is presents no one great engineering problem; it is merely an immense amount of detail; the road will be built the whole of its length close to the surface of the street; the rail will-be below the level of the street about 17 feet; an ordinary building foundation will go down 18 or 20 feet, and there are much deeper foundations along Broadway; as for the obstacles we will strike we have fully investigated; the commission of 1891, under my supervision, put down test holes from South Ferry to Thirty-fourth street every block; we carried those tests to rock going 163 feet; the soil and gravel and rock that came up was collected and carefully put away in boxes and are now in our possession; we know exactly what we will have to do there; our water pipes, gas pipes, pneumatic tubes, subways of the various electrical companies which now in connection with the cable road, practically occupy the whole street; if it were not for those pipes it would not be any more difficult to construct the underground reflected than to construct an ordinary road; you will see lots of them being built at a greater depth; as far as the construction of the underground railroad it presents no difficulty.
- Q. You do not do it by tunneling? A. No, sir; it is nothing but the excavation of a cellar; the pipes and wires now occupy the street from curb to curb; they have been put in one after another with no regard to system; it is impossible to lay another pipe in Broadway.

Q. While that was being in the course of construction could the Broadway road run? A. The Broadway road would not be interrupted one moment; that is shown by the fact that the cable railroad people themselves excavated a huge pit at Twenty-third street, 12 feet clear in the bottom, and 50 feet wide; there was no delay; there is no trouble about doing the work of that sort, as it only makes it a little more expensive.

By Mr. Nixon:

- Q. There is nothing to interfere with this construction so far as the present transit system is concerned? A. No; in regard to the construction of the road there is no insuperable obstacle or any one obstacle that would render the work of construction difficult or exceedingly expensive or beyond what can be carefully and equitably estimated long beforehand; as regards the success of the road I do not think that anyone who will subject to review the operating receipts of the railroads in the city of New York will question for one moment that the road will be successful; it has been pointed out in the public press, and I think before this committee, that a underground railroad would not pay because an underground railroad in London does not pay; you might say just as well, that because an elevated railroad in Chicago did not pay they would not pay here.
- Q. You think it is not good reasoning? A. No; it is not; New York city is a big city; the travel is north and south, and 95 per cent. of the travel is in those directions, and that travel is increasing in a far greater degree than the population of the city proportionately; as soon as a road is opened north and south it commences to pay; and so it is not a question because an underground road does not pay in some other city it will not pay here.

Edward Shephard, counsel of the Rapid Transit Commission, called and sworn, testified:

Mr. Shephard.— I think what Mr. Steinway stated about details was substantially correct. The details that were adopted by the

commission prior to the popular vote were considered at that time as illustrations, practically, and illustrations of the construction of the road; to those details as details there was no moral admission any more than there was any legal admission. But as Mr. Steinway pointed out on the question of the main feature as to whether it should be underground or what it should be, there was something of an admission to moral restraint, although there was no legal admission, and I think Mr. Delafield and Mr. Steinway were substantially correct, although they stated the same thing in somewhat different ways.

William H. Morrell, called and sworn, testified:

Mr. Morrell.— I have lived in New York forty-two years, and twenty years ago I took up the subject of rapid transit; and my first information was in reference to the underground system of London, which I examined industriously for at least one month to see if it was proper for adoption here. This was in 1873 that I They have not several elements in examined the London road. London to contend with that we have here in New York. is not composed as our island is of alternate rock and quick-sand and water-courses, which underlie our whole city alternately. This would be in various places very difficult to contend with without disturbing the foundation of some of our most valuable structures, and the construction would very materially interfere with such a boulevard as Broadway for a given number of years, and therefore I come to the conclusion an elevated road is the only thing we can adopt with safety other than surface roads. which of late have multiplied and improved immensely. I got up what was called the New York Rapid Transit Association, 25 gentlemen of large real estate interests composing it, and subscribed \$10,000 apiece to back the enterprise and agitation in getting elevated roads in this city. We held meetings industriously, commencing at the Chamber of Commerce, board of underwriters, real estate and stock exchanges, and various other places, which were well attended and created public opinion on which the rapid transit bills were passed. The construction of elevated roads was

new to the world, and their construction was new, and capital naturally held back, and it was difficult to get capitalists in the enterprise, and had we not got some adventurous spirits like Commodore Garretson and others it would never have succeeded in He brought in Belmont and Billings of Chicago, and other capitalists here like Sage, and finally Mr. Gould bought up a controlling interest in the enterprise, ousting Mr. Cyrus W. Field, who had come in as a speculation to control the whole thing, but The present rapid transit commission for was incompetent. underground roads has proved a failure, I may say, two or three times over. They had a second commission appointed to pronounce upon the work of the first. They approved, because they were created to approve; but so many impediments came up that it was thought wise to consult the elevated people, which they did, by the extension of their lines as cheaper and more practicable, but the negotiations failed between the elevated roads and the commissioners, and they went back onto the underground theories, the newspapers going with them; and on that they have been spending money ever since, but to no great purpose. erty owners along the line of middle Broadway are opposed to any such scheme, and they will continue to enjoin them to the bitter And only to-day the assistant comptroller told me they had spent somewhere from \$200,000 to \$250,000, and I think he quite agrees with me that it is thrown away, and that we will never have an underground road in this city from the Battery to the upper The second commission created by legislative enactment and named in the act, called in experts to pronounce upon their work about a year ago, headed by ex-Mayor Hewitt. report was adverse to the feasibility and practicability of most of the route, but they have gone on, determined to carry out their scheme; and while they have been experimenting for three or four years, more cable lines and trolleys have been built than ever before in the city, which has supplied largely the want of the public and taken away correspondingly from the elevated roads the passengers that they hitherto carried, and may prevent the further construction of elevated roads, although I think it would

be a great detriment to the city if we can not extend the lines and have cross lines in connection with them on the same level, and not on the surface, where a wagon broken down stops the whole system, or the cable broken stops the operation of it. a year ago I formed a syndicate of steel manufacturers, bridge builders and practical mechanical producers, who offered to build 50 miles of road in the city of New York up the two water fronts and touching every ferry, cross the city in several places, to accommodate Central park and the central portion of the city, with one cross line in the annexed district, and build north and south lines as far as the city runs on the east side and the west side. would require 50 miles of road, and they offered to build it for \$30,000,000 and put up \$1,000,000 as earnest money in the comptroller's hands of the city of New York, and they made this offer through me, as I was familiar with the question and the city. Steel and iron were never so cheap, and we could have had a better road then by 50 per cent. for the same cost as the original structures now running, and better roads, with all the modern improvements and operated by electricity, which was our proposition. Electricity will undoubtedly become the motor of all roads in and The experiment now going on of the introduction about cities. of tubular tubes in Lenox avenue to carry the wires instead of overhead is only waiting for the action of the frost in winter upon it to see if it will affect it, before being adopted by the other roads. and the extension of that, the Metropolitan system. I believe it will be feasible and practicable thoroughly, and much better than the continuous rail that Mr. Gould alluded to, which I examined in Chicago, which becomes charged and is dangerous, and more than one man has lost his life by getting into the current which he could not do underground. Our present system of disposing of franchises at public auction has proved beneficial to our municipal treasury already, and we have received large bids for certain franchises, some so large they never went into operation, in competition among the bidders. I would say that all our public highways for transit should be governed and managed by private capital by all means, as they are much more economically man-

aged and the political element is kept free from it, under which so much jobbery takes place in large cities; that all such franchises should pay tribute to our municipalities or to the citizens thereof is perfectly clear and a just and equitable meas-Whether it is best to hand over to the city treasury ure. the excess, or to reduce the fares to a point that will pay a given dividend, say 10 per cent., for the people who run the risk, is a question. It is a very serious one to handle. The people, I think, would more appreciate the reduction of fares, particularly the workingman who has to go to his labor and come from it daily. If it went into the city treasury it would go to the benefit largely of the men who paid our taxes, who are rich men. Therefore, I think the masses should be accommodated by low fares so far as they can whenever they have reached an actual dividend of 10 per cent. on any line by honest construction, and not swollen by the watering of stock or overissuing of bonds.

The committee took a recess, to meet at Albany Monday, December 9, 1895.

The committee convened at 132 State street, Albany, N. Y., Monday, December 9, 1895, at 10 a. m.

John W. McNamara, called and sworn, testified:

By Mr. Gleason:

- Q. Where do you reside? A. Albany; 74 Willett street.
- Q. Are you connected with the Albany Railway Company? A. I am.
 - Q. In what capacity? A. As treasurer and general manager.
 - Q. When was this company incorporated? A. In 1863.
- Q. And the capital stock, I think, we brought out on the last examination? A. Yes; that was all gone over.
- Q. It is \$1,500,000? A. When it was incorporated it was only \$100,000; in 1863.
 - Q. Now it is \$1,500,000, all issued? A. Yes, sir.

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- Q. What is the mileage of your road? A. The Albany Railway Company, about 15 miles.
- Q. And then you lease the Watervliet Turnpike Company? A. Yes; which is about 15 miles more, making about 30 miles in all, of single track.
- Q. I think we drew out the fact that the bonded indebtedness was \$670,000? A. I can not tell you what the bonded indebtedness is; the Albany Railway, the bonded indebtedness is \$500,000, and the Albany Railway has guaranteed \$500,000 of the Watervliet bonds and \$30,000 of the North and East Greenbush Horse Railroad.

By Mr. Nixon:

- Q. What was this \$500,000 issued for by the Albany Railroad? A. One hundred and fifty thousand of it issued for the purpose of taking up bonds issued on small mortgages, and \$300,000 for construction.
- Q. When you changed from horse power to electricity? A. Yes, sir.

By Mr. Gleason:

- Q. This was one of the first railroads to change from horse power? A. It was among the first.
- Q. When was that change made? A. The first cars were operated on the 28th of April, 1890, and the change was begun in the fall of 1889; that is, the construction and the building of the power house and the changing of tracks.
- Q. What were the receipts of your company for the last year? A. Nearly \$500,000.
- Q. And about what per cent. was expended for operating expenses? A. I have not that at hand.
 - Mr. Rosendale.— Mr. Fassett is here with all the details for you.
- A. Of course we can get a copy of our last report, which would show you, the report of June 30, 1895, to the Railroad Commissioners.

By Mr. Nixon:

Q. Are you familiar with the physical operation of the road? A. Not so familiar as Mr. Fassett, who is the assistant general manager, and is over the ground every day; he looks after the practical part; I look after the general management in the office.

By Mr. Gleason:

Q. The facts you are familiar with are those we brought out on the other examination? A. Yes, sir.

By Mr. Nixon:

- Q. What dividends did you pay last year? A. Six per cent.
- Q. What interest do your bonds bear? A. What we call the consolidated bonds, \$500,000, bear 5 per cent., and the bonds which we have guaranteed of the Watervliet and Turnpike Company bear 6 per cent., and the bonds of the North and East Greenbush Horse Railroad Company bear 5 per cent.; these bonds were issued by the Watervliet Turnpike Company before we leased it.
- Q. Now, this belt line which runs down Pearl street is a portion of your Albany road? A. Yes.
 - Q. And connects with the State street line? A. Yes, sir.
- Q. What system of transfers have you? A. We have no transfers; we have under consideration, and have for some time been seeking to gain the consent of the common council to put in special work by view of running cars by another connecting system; instead of transfers, have cars running on all lines to nearly every part of the city in Troy; for instance, you get on a car and go to Troy—
- Q. Instead of transferring the passengers to transfer the cars? A. Yes; that is the idea; we are situated so we can run that system better than we can run the other.

By Mr. Gleason:

Q. Transfer the cars? A. Yes; there would be no stand at the foot of State street; the cars would either go to the north or the south; the cars would be in motion all the time; the

ordinance is before the common council now, and which I trust they will give us permission to put in special work; this work consists of double curves at the foot of State street to the north and single curve to the south; curves at the corner of Iark and Washington, curves at the corner of Lark and Hamilton street, uniting the Hamilton street line with the Lark street line; and a curve at the corner of Beaver street and South Pearl street uniting the Hamilton street line with the South Pearl street line.

- Q. Does this make it necessary to go over streets on which you have no transfers? A. No, the company claims, and I think the late common council so advised, that we have perhaps the right to put in the curves without the permission of the common council, but the present common council take a different view and say every time we break the streets we must get permission of the street commissioner, and the street commissioner would not give it.
- Q. Do you pay anthing to the city for the franchise? A. Nothing but the ordinary tax.
 - Q. The State and county tax? A. Yes.

By Mr. Nixon:

- Q. You are compelled under the Railroad Law to maintain the track between the track and two feet outside? A. We are situated a little different, perhaps, than other roads; our assessors have all claimed that our rails and ties and poles are real estate and are assessed in every ward in the city.
 - Q. They are correct in that, are they not, Mr. Rosendale?
 - Mr. Rosendale.— We have never disputed it.
- A. And we will have paid for assessments for pavements, new pavements and repairs, at the close of the fiscal year, nearly \$60,000; work on Central avenue to be paved from Mott to Main avenue, about a mile and a half of brick.
 - Q. What is your rate of taxation? A. About 2 per cent.
- Q. What is the ratio of the assessment of your property here? A. We think we are paying nearly full rates now.

- Q. You say you pay no commissions to State for your franchise? A. No tax except the ordinary taxes and assessments for repaying, and we keep in repair that portion of the streets between our track and for two feet on either side.
- Q. What is your fare here? A. Five cents; voluntarily reduced from 6 cents.
- Q. I suppose you reduced it on account of the inconvenience of making change with the 6-cent fare? A. No; there was always an implied understanding on the part of the road as soon as the receipts of the road justified it it would reduce to 5 cents.

By Mr. Gleason:

Q. You charge 10 cents to Troy? A. Yes; we carry beyond the city limits for 5 cents; we carry to the toll-gate, which is several hundred feet beyond the city line; we carry down into the town of Bethlehem.

By Mr. Nixon:

Q. How far is it to your city limits from Pearl street? A. We carry not more than a quarter of a mile into the town of Bethlehem beyond the city limits for 5 cents.

By Mr. Gleason:

Q. How far is it from the corner of Pearl street and State street to the city limits, either way, how long a ride? A. South, about two miles, and north about the same, I should say.

By Mr. Nixon:

- Q. Do you know what per cent. of your gross receipts the operations are? A. Sixty-five and six one hundredths per cent, Mr. Fassett says; he knows.
- Q. Under the electrical system do you think there is any especial wear and tear by your system on its pavement? A. No, sir, there is not.
- Q. There is not the wear there was under the old horse car system? A. No, sir.

- Q. In your judgment, would not that do away with the reason for the enactment of any such measure as that, requiring a company to keep the pavement in repair? A. Yes.
- Q. It is generally supposed that the reason they have been compelled to maintain the pavement was that the street car companies were the ones that wore it?
- Mr. Rosendale.— In this instance on the main line, four horses were required at every car, as illustrating that idea, if you desire to put that in.
- Q. Yes; what class of people, as a rule, form the majority of those who use your road, the laboring classes? A. I think the passengers on our cars are pretty evenly divided amongst all classes.
- Q. Probably more so than many cities? A. Yes; we are getting to be a residential city; most of the laboring men are carried on our Pearl street and Broadway lines north and south, I think, more than east and west.
- Q. Are the laboring classes in your city at any remote place from the place of their employment? A. No; we do not carry our population as many times a year as other cities, as Troy, for instance; we are compactly built, and the greater part of our population is within half a mile radius of our City Hall; if you take a circle around there you will get 50 per cent. of the city of Albany; I want to say, as far as the Detroit principle is concerned, that is right; the way to get cheap fares is not by imposing taxes on railroad corporations or those who operate railroads, but by taking them off and giving the deduction to the individuals in reduced fares; the passenger never participates in the taxes that are levied on railroad corporations.
- Q. The bulk of them do not? A. I may say none of them do; it goes into the public treasury and wasted, perhaps.
- Q. What surplus did you have last year after the payment of your expenses? A. I do not think we had a surplus.
 - Mr. Fassett.—We had a deficit of \$16,787.96.
- Q. Have you ever considered the question of a certain low rate of fare on your road at certain fixed hours? A. No, sir.

- Q. On some roads, between 6 and half-past 7 in the morning and half-past 5 and 7 at night, fares are reduced to 3 cents? A. No; we have never considered them; for the reason, I suppose, that there has not been any agitation on the subject, and for the further reason that we have not as many laboring people; we run our cars all night.
 - Q. Are you compelled to? A. No; that is voluntary.
- Q. How often? A. On the State Street line to West Albany, every forty minutes, and Pine Hills every forty minutes, and on the Belt line every half an hour, and to Troy every half hour.
- Q. How long a run is it from here to Troy? A. From State street about $6\frac{1}{2}$ miles.
- Q. How long a time? A. We run it at night in thirty minutes; it takes longer in the day-time.

By Mr. Nixon:

Q. How often do you run? A. We run in half an hour; the fare is 25 cents with the railway and 20 cents with us, for the round trip; I have been with the Albany Railway ever since its inception; I became its secretary in 1864, the first car being operated the 22d day of February, 1864, and I know at the time the railroad was constructed up State street the right to operate a railroad in Albany was not worth anything; it was a question whether there were people with sufficient courage to put their money into a railroad; they operated the railroad without making any money.

By Mr. Gleason:

Q. How many years before you earned a dividend? A. I think ten; and then all the reason in the world they were able to earn a dividend then, they were helped out by the construction of the Capitol, and got a contract to cart the stone and material up the hill; while the franchise of the Albany railroad to-day is very valuable, and the franchise of its leased line now is very valuable, there have been times when neither of them were worth anything; that is not so very long ago, when it looked as though the franchise

to run a railroad between Albany and Troy was not worth anything, because they would not travel by the horse cars or electric cars.

Q. Is 6 per cent. the largest dividend you ever paid? A. We paid an extra dividend of 6 per cent., and that was by reason of an error in the bookkeeping never satisfactorily explained by the bookkeeper and auditor; our board of directors were led to pay an extra dividend; no dividends were paid during the electrical construction, of course, for more than a year; it was discovered after the dividend was paid that an error had been made of 1½ per cent.; therefore they showed a dividend.

By Mr. Nixon:

- Q. Do you not think if, in this reconstruction, the matter of the pavement was eliminated, that you would be able to give a reduced fare? A. If streets are to be repaved in the future as in the past five years; yes, sir.
- Q. You would be compelled to do that now under the present law? A. Yes; it is something looking towards a reduction of fares, a tendency that way.
- Q. You do not consider the State street property any less valuable because your road runs here? A. It is more valuable.

By Mr. Gleason:

- Q. In the outlying districts you run upon streets not paved? A. No; it is all paved; it is either paved by the city and we paid, or where we paved it ourselves; we paved down on the Kenwood road.
- Q. Does the Cantor act apply to this city? A. No; it never applied to Troy, but it did at one time apply to Albany; Rochester was also left out at that time; the census that was named in the Cantor act was a more clever census, of a certain date; I think it was accidental; I do not think it was intentional.
- Q. What do you think of the matter of disposing of franchises under the Cantor act; you understand the system? A. Yes.
- Q. That the system be sold at a percentage? A. It is not the true way.

- Q. Have you had any experience with that act here? A. Yes, sir.
- Q. You have had other corporations bidding for franchises? A. No, sir; but we have had the illustration of the necessity of being compelled to bid on franchises that were offered by the common council.
 - Q. Do you refer to street railroad franchises? A. Yes, sir.
 - Q. I suppose your franchises here are perpetual? A. Yes.
 - Q. There is no term limited? A. No.
- Q. Is there any other company in operation in Albany? A. No; but there can be.
- Q. What has been your experience in the operation of the hill; do you experience any difficulty in maintaining proper speed, or do cars ever get away from the control of the motorman? A. There have been a few cases where drivers have lost control on the hill; but we have not had any serious accident.
- Q. About what is the grade from the foot of State street to the Capitol? A. From a point near James street to Lodge street, the first street below here, the grade is about 8 per cent.; from Lodge street to Eagle street the grade varies from 5 to 6 per cent.; the ordinances require us to remove the snow from our tracks and then remove it from the streets, so that the ordinary traffic of other vehicles will not be impeded; we find we must remove all the snow from all the streets where we operate our cars, except such wide streets as State street and Washington avenue and Madison avenue; even from those streets we cart hundreds and hundreds of loads.

By Mr. Rosendale:

- Q. Does the steepness of the streets require additional men? A. Our motto is to have men enough looking after our tracks; on our tracks we have men to keep our tracks free from snow and ice and to sand them; we do not carry sand boxes on our cars, but in places where there is any danger there are men stationed on the hills with sand boxes.
 - Q. Your Broadway line is really the only one where you have

not a heavy grade? A. Even there we have to look out for some of our cars; we go under the viaduct.

By Mr. Nixon:

- Q. Is there any ordinance governing your rate of speed? A. Yes, sir.
- Q. What is it? A. Between Clinton avenue and Gansevoort street, eight miles, and between the eastern bounds of the street and Lark street, eight miles; north of Clinton and north of Gansevoort and south of Lark street, 12 miles an hour.
- Q. Have you any appliances on your cars by which your motormen can tell the exact rate of speed? A. No; I do not know as there are speed indicators.
- Q. How can a motorman know? A. He can know very well by running a car on schedule time; our schedules are made with reference to time limit, and the driver can readily tell.
- Q. That would be all right if the car ran on schedule time, but in the city of Buffalo, for instance, they have many things that delay cars, and there, in certain sections, a motorman tries to make up time and they have many accidents, so without the car is running on schedule time how can you tell? A. Mr. Fassett can explain to you what our regulations are in that respect; we do not aim to make up time by violation of ordinances.
- Q. You have no means of knowing? A. The inspectors on the line all the time are apt to know; of course, I do not say that some of our cars do not run beyond the time limit, but our aim is to have them run on time.
- Q. Does this ordinance make your rate of speed the same at all hours of the day? A. Yes, sir.
- Q. It does not take into consideration the hours when the traffic is heavy? A. No; we take that into consideration; we know during the rush time; we know we can not perhaps run at the rate of speed east of Lark street at 8, or west of Lark street at the rate of 12 miles an hour, for the reason the car has to stop so often.

By Mr. Gleason:

Q. With your system of tracks and switches, if one car gets out of order it must necessarily disarrange your entire system? A. Our track is a double track road, except that south of Pearl street, and our Hamilton Street road, from Philip street to Dove street; we are substantially a double track road.

Edgar S. Fassett, called and sworn, testified:

By Mr. Gleason:

- Q. You reside in Albany? A. Yes, sir; 97 Columbia street.
- Q. Are you connected with the Albany Street Railroad? A. Yes; assistant general manager.
 - Q. You are familiar with its operation? A. Yes.
 - Q. And, in fact, have general charge of it? A. Yes, sir.
- Q. You have some 30 miles of lines to your road? A. Yes, sir; 34, I think it is.
- Q. Have you the report which you made to the Comptroller this last year? A. Yes; to the Railroad Commissioners; a copy of the report.
- Q. What were the receipts of your company? A. Can I take this from the record?
 - Q. Yes. A. Gross earnings from operation, \$490,061.49.
- Q. Were there any earnings from other sources? A. Six thousand seven hundred and twenty-eight dollars, consisting of advertising and turnpike receipts; one of our leased lines, the Watervliet railroad, also owns a turnpike between Albany and Troy.
 - Q. And your operating expenses A. were \$321,651.80.
- Q. Making your net receipts how much? A. One hundred and seventy-five thousand one hundred and thirty-seven dollars and sixty-nine cents; that was a gross income.
- Q. Yes. A. The fixed charges, the items of rentals, the guaranteed interest on the Watervliet bonds, came in as rental amounts to \$95,429.93; net income, \$79,707.76; we declared a dividend of \$75,000; that left a surplus for the year, \$4,707.

- Q. You paid a dividend of 5 per cent.? A. Six per cent.
- Q. I thought your capital stock was \$1,500,000? A. It is; at that time it was \$1,250,000; there was \$250,000 of debenture bonds which have since been transferred into stock.
- Q. You have taken up some outstanding obligations and substituted stock therefor in the past? A. Yes, sir.
- Q. What rate of interest do those debentures bear? A. Six per cent.

By Mr. Nixon:

Q. Who holds the bonds of your road now? A. I do not know a bondholder.

By Mr. Gleason:

- Q. What wages do you pay your conductors on the road? A. By the hour, $16\frac{1}{2}$ cents.
- Q. You have an hour system and not a trip system? A. Yes, sir.
- Q. Does that apply to all your workmen, your motormen and others? A. Yes, sir.
 - Q. What do the motormen get? A. Sixteen and one-half cents.
- Q. Then you have, if I understand you, a system of inspectors?

 A. The inspectors are paid \$14 a week; I make that distinction because I pay the inspectors if they are sick and laid off a day; I make no deduction for that; they work seven days in the week.
- Q. About how long does a conductor work in a day? A. The average time is ten hours.
- Q. Does he have the right to work longer if he wants to and if there is a call for him? A. Yes; if it is necessary he works longer; of course, there are some runs that are more than that, and among those we have what we term as a swing relief; if a man works longer than ten hours a day he has off one day in the week.
- Q. How long does it take to make a run on your road? A. The longest one, from Kenwood to Troy, something over nine miles, is made in an hour; the shortest run is thirty minutes; two hours for the round trip from Kenwood to Troy, I should have said.

Q. In selecting your employes do you adhere to the principles of civil service reform? A. Yes, sir; every employe, motorman and conductor, has to make an application on a written blank, and from that we judge of his qualifications.

By Mr. Nixon:

- Q. Do you have any mental examination of your motormen? A. We have a physical examination; yes, sir.
- Q. Made by a physician? A. No, sir; the general manager passes finally on them and gives them examination for their eyesight and general physical condition.
- Q. In Brooklyn they have a medical examination? A. Yes, sir; a man, after he makes his application and his application is approved, and he is put on to break in, if he is a motorman he breaks in six days on one line, and on each of the other lines one day, and then puts three days in the shop and then he comes up for his final examination before the general manager.

By Mr. Gleason:

Q. He is given six days in general instruction? A. Yes, sir; instruction of the cars and motors and power, and how to get out of a hole?

By Mr. Nixon:

- Q. Do you have any graded system of wages? A. No, sir.
- Q. After a motorman has gone on and gone through this preliminary examination, and takes a car, you pay him the same wages as you do men that have been on for years? A. Yes, sir.

By Mr. Gleason

- Q. Are your men promoted from the motormen and conductors?A. Altogether by promotion.
- Q. You have no system of transfers on your road at all, have you? A. No, sir.
- Q. Your plan is to start a car from a given point and run it continuously through to a given destination? A. Yes, sir.
 - Q. And not transfer? A. Yes, sir.

Q. Now, I understood Mr. McNamara to say that you were contemplating a change in your system whereby from the Belt line, the Albany system proper, as I would call it, you will run a system of continuous cars also? A. Yes, sir; the system is called the inter-connecting system.

Q. Just explain that. A. The idea was, that once every half hour a car should pass over every line, going to the destination of every other line; for instance, a car starting at West Albany at 12 o'clock would run down State street to Troy; the next car down State street from West Albany to Troy would be one-half an hour later; five minutes later than that a car would leave Pine Hills, running down State street to Troy, and so every half an hour; and so on every line, giving a headway on this hill of every two and a half minutes; a car is running to Pine Hills now every seven and one-half minutes, to Troy every thirty minutes, to Kenwood every thirty minutes, and I can not remember the whole time-table now, but it is designed to bring a car every thirty minutes from each point on the road to the point of destination.

Mr. Rosendale.— One of the principal advantages to be attained by that by the public and the railroad company, lies in the fact that in the transfer of every passenger there is more or less risk attending, as will be observed. A transfer from one car into another car is always attended with danger; particularly women with children and persons with bundles. That will be entirely obviated, because a person would be embarked in the car at one point and carried to the point of destination. The convenience of the public would be served, because a person embarking would get a seat in a car. When they embark at the point of transfer they may find a car there already crowded. The discomfort and annovance obviated would be considerable. These are some of the decided advantages which are discussed by some of the members of the board in advocating this inter-connecting system; particularly in a city like ours. The only inconvenience, perhaps, would be that a person might have to wait for one or two cars to carry him through to the point of destination. But when he does get it it is a through train every time. Take a great wide, broad street

like this is, it seems to me the disadvantages that might exist in some cases do not exist here; that the advantages far outweigh the disadvantages.

Mr. Gleason.—Do not you find some complaint by reason of persons taking the wrong car?

Mr. Rosendale.— The system is not in operation yet. The cars will be all plainly marked on the front and rear, and then lighted by colors at night, so as to distinguish still further their destination.

By Mr. Nixon:

- Q. Your road has made application to the common council to grant additional street privileges to carry out this system? A. Yes.
- Q. While you have no transfer system at the present, you have under consideration a system which, in your jugdment accomplishes all the advantages of a transfer system with additional conveniences? A. Yes, sir; our road is so situated that that can be done; it can not be done in many cities; more than 75 per cent. of the accidents occurring to passengers on the cars occur from passengers getting on and off from the cars.
 - Q. How many cars do you operate on your system? A. About 50.
 - Q. On your entire system? A. Yes, sir.
- Q. What is your headway between your cars on State street? A. Two and one-half minutes.
- Q. On Broadway? A. Our Troy line runs every five minutes; one runs on Broadway and the other on Pearl.
- Q. Both lines? A. Every seven and one-half minutes; we are limited to that on account of the single track on Hamilton street; we would run every three minutes if we could.
- Q. Do you have any complaint about crowded cars? A. We do on the Belt line; we would prevent that if we could get consent from the common council.

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Q. You think the blame lies with the common council instead of the railroad company? A. We do, because we have applied for the franchise.

- Q. You have hopes of getting another track in there? Λ . Yes; if our cars are crowded at rush hours here it is because up to date we have not sufficient power; we have now contracted for, and are having built, additional engines and generators.
- Q. You now run up to your full capacity? A. Yes, sir, and a little beyond it; we have had one-third of our engines broke down a short time ago.

By Mr. Gleason:

Q. Do you have any complaints about your cars not being properly heated and lighted? A. They are very nicely heated; the Albany Railway Company have heated by stoves, and they were the first road to adopt the entire system of electric heating.

By Mr. Nixon:

Q. How much does it cost you per day to heat those cars? A. I can not tell you; we expect this winter, to make tests to show us exactly what it costs; we figure that it costs more than by heating by stoves, but that the additional cleanliness in the cars, and the condition the cars come out in the spring without being discolored by smoke and also preventing dust and ashes getting into our motors, that with the whole thing considered it is just as cheap and we get an extra seat in the car so we consider it economical.

By Mr. Gleason:

- Q. Did you occupy your present position at the time the road was electrified? A No; at that time I was connected with the construction company; I was with the company before as assistant superintendent; I came again with them in 1892
- Q. You are familiar with the construction of this road? A. Yes; I did some of the constructing of it.
- Q. What do you think the cost of construction of an electric road would average per mile in a city of the characteristics of Albany, to commence anew? A. At present?
- Q. At present, yes; to say nothing about paving at all? A. About \$7,500 for the track, and \$3,500 to \$4,000 for the overhead construction.

Q. Eleven thousand dollars or \$12,000? A. Based on the prices of last summer, which has been the cheapest construction we ever had.

By Mr. Nixon:

- Q. What is the weight of your rails? A. Ninety-pound girder rail; as we were practically an experimental road we have relaid some of our road three times; no one knew when electricity first started what rail was required; we started with a 47-pound flat rail on timbers; we then put in the first girder rail that was made, 60 pounds to the yard, on chairs, cast-iron chairs; they went to pieces; we then put in 65 and 75 pound rail on steel chairs, and that has gone to pieces; and, lately, begining last year, we put the first nine-inch deep girder rail, no chairs, right from the top of the tie to the girder, and that we hope will last.
- Q. Your system was the first road electrified? A. The first in a system of this size.
 - Q. Do you have concrete under your rails? A. No.

Mr. Rosendale.— In repaying Central avenue, will you state to the committee what provision is made for the construction and the subconstruction? A. The construction called for in the work is 6 inches of concrete under our roadbed and then a cushion of sand; the cushion of sand is $1\frac{1}{2}$ inches to resist the vibration; from the experience I have had I believe it is the poorest construction that can possibly be had; it is entirely too rigid; the trouble with us has been in the rail and in the point.

By Mr. Nixon:

Q. Don't you think the question of subconstruction would vary in different localities on account of the construction of the soil?

A. I think it would.

By Mr. Gleason:

- Q. Do you think as general manager of your road, you are better qualified to judge than the common council? A. Yes, sir.
- Q. Do the common council require this construction? A. Yes; and as against the suggestions we made in that regard; I think

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perhaps the reason was because where we had constructed six miles of road through an asphalt road the road has gone to pieces; the whole trouble is not with the substructure, but with the rail, and I will state the rail used there was the best and heaviest at the time it was put down; that was on Hudson avenue.

Q. They claim that your vibration has destroyed the surrounding pavement between the two feet and the curb? A. We have already spent \$21,000 in putting down the pavement we originally put down; we have not had any trouble with that asphalt yet, because the asphalt street is in charge of the contractor for five years.

By Mr. Rosendale:

Q. As I understand you, from the peculiar conditions under which this railroad was transferred to an electrified system, the reconstruction has been enormously expensive? A. Yes, sir; the electric railroads that are being built now, and the horse railroads being reconstructed, have the benefit of our construction.

By Mr. Gleason:

- Q. You can buy rails and motors and everything else connected with an electric road cheaper now than four years ago? A. Yes, sir; and very much better.
- Q. About how many men do you employ each day on your road? A. Outside of construction or repairs or laborers, about 400; we sometimes have as high as 1,000 in the summer when we are doing track work, and we have done it every summer.

By Mr. Nixon:

- Q. What are your speed ordinances? A. Eight miles an hour in the center of the city, and 12 miles an hour in the outskirts.
- Q. Is that satisfactory to your company? A. Yes, sir; perfectly; the question that was asked Mr. McNamara, I do not think he explained fully in relation to time; our schedules are made with especial reference to speed ordinances, giving a factor

of safety in starting and stopping, and our instructions are there is no time to be made up within the 8-mile limit; the only time to be made up there is in not stopping for passengers; if a car is between Lark and Broadway, and is behind time, the first two cars will not stop for passengers.

- Q. So that under the rules and regulations of your company, a motorman is not allowed, on account of any delay, to increase his time of running? A. Not at all.
- Q. In excess of the time provided by the ordinances? A. No, sir.
- Q. And the rate of speed is the same for all hours of the day? A. Yes, sir.
- Q. Do you think, under all circumstances, it is advisable to leave the question of speed ordinances entirely with the common council without any question of appeal to any other board if, in your city a condition should arise, so the sentiment of the public was prejudiced against your corporation and the common council would be very liable to be governed by that sentiment, whether fair or unfair—don't you think if the common council prescribed an ordinance totally unfair there should be the right to appeal to some outside board? A. I do; I think the safer way would be to leave it to the management of the railroad; the management would not want to operate at an unsafe speed; if we had no ordinance I would not want to change it now.
- Q. Do you think it would be well, to make, for instance, the board of Railroad Commissioners the court of final resort? A. Yes, I do.

By Mr. Gleason:

- Q. They claim in the city of Brooklyn that the surface roads have been very materially affected by the rate of speed? A. I went over the Brooklyn roads two or three months ago, and saw how they operated.
- Q. Your operating expenses, you stated, were 65 per cent.? A. Yes, sir.

- Q. That is a little above the general average? A. Yes; we have a very hard road to operate on account of our grade; we used to operate here on the hill with six horses at times; we have the same loads to carry now that we did then.
- Q. What were your operating expenses under your horse-car system; I mean, the present? A. The last few years they were about 102 when I was there; they never paid any dividends.
- Q. You used to levy assessments instead of paying dividends? A. Yes; that was the way from 1884 to 1890; there were no dividends declared during that time.
- Q. About how many years have you been declaring dividends? A. I can not say whether it was 1891 or 1892;1892, I think.
- Q. Had you declared no dividends on this road previous to then? A. Not in my time; since 1884.
 - Q. Do you run any vestibule cars on your road? A. No, sir.
- Q. What do you think of the use of vestibuled cars? A. I do not believe in them.
- Q. Why? A. The principal reason is, at the time the motormen needs any protection, if he needs it at all, is through any storm or very cold weather, and in storms and cold weather it is impossible to run a car with the windows of the vestibule closed, because the vision of the motorman would be obscured either by rain or frost in cold weather, and we believe here that the danger from accidents will be very much increased by obstructing in any way the view of the motorman; I think there is no question but what that was the cause of the Cleveland accident.
- Q. Of the viaduct accident? A. Yes, sir; while the conductor signalled to go ahead, if the conductor had had an unobstructed view he could have seen the light; he testified he could not on account of the rain; we give the motorman the front platform entire to himself; he has nothing to obscure his view; and we do not allow anyone else to ride on the front platform; the gates are closed on both sides, and his vision is unobscured both ways; a man that has been on the car through the summer and works gradually through the winter does not suffer at all from the cold; I have big caldrons of coffee fixed for them in the stable, and 9

men out of 10 won't touch it; the conductor really has the harder time.

- Q. Have you had any requests from motormen for protection? A. No, sir; on the other hand, our motormen say they are glad they do not have it that way.
- Q. Could you send us up a motorman this afternoon about 2 o'clock; we endeavor to get some testimony from motormen on this subject? A. All right.
- Q. Do you use any fender? A. I have tried over 40 different fenders; we have, perhaps, ten different styles on our cars now; I believe the ordinances require our common council to select the fenders, and there is no selection by them.
- Q. We had several bills last year providing various schemes, and I think some were for the benefit of some especial fenders; there was a bill passed which provided that the common council might select the fender, and, in case they did not, the Board of Railway Commissioners must; that left it with the common council to select it, and then in case they failed to, then to compel the Board of Railway Commissioners to; the objection was made that the common council might be hostile to the interests of the road? A. We never had an accident on the Albany Railway which would have been prevented by any fender that I have ever seen; I have examined them all.
- Q. Do you us a wheel guard of any kind? A. No, sir; in the accidents we have had, only two people have ever gone under the wheels.

By Mr. Rosendale:

- Q. Was one the Ozier? A. Yes.
- Q. What was the result of that case? A. That child ran from behind a coal wagon directly in front of the car; the motorman reversed the car and the child fell within 5 feet and the reverse through the car back over it; the action was brought which resulted in a verdict for the plaintiff, and it was taken up and reversed by the general term.

By Mr. Gleason:

- Q. How many accidents have you had since you electrified your road, and complaints brought against you? A. I could not tell you; we have been particularly free from fatal accidents here; I think it has been largely due to the class of men employed on the road.
- Q. What are your rules and regulatons in connection with the employment of your help; do you have certain rules regarding their habits? A. The State law really requires that, if it is obeyed; and we try to obey the State law implicitly; that a man shall be over 21 years of age, and not be of intemperate habits, and we also insist that a man shall be in sound physical condition, and a motorman not under 150 pounds in weight.
- Q. Do you think if the restrictions under the General Railroad Act, which are placed upon your road, and the charges you are compelled to pay for pavement and repairing pavements were removed, and you were allowed to occupy the streets the same as any other means of locomotion, without charges placed upon you, you would be able to reduce your fares? A. Not here; in the future; we have done all the paving; all the work that we have has not only been paved once with cobble stone, but since repaving with granite block or brick or asphalt; so we are through with it now.
- Q. I mean with any new construction or extensions were made to your road, and those exactions were not placed on your company, that you would be able to give some service at a cheaper rate than at the present time? A. I think we would; I think it might help.
- Q. Do you think if you had certain fixed hours in the morning and evening, when you have the bulk of your traffic, and at a time, especially when the laboring classes of your community are going to and from their homes, that if you had a 3-cent fare that it would increase your traffic on your lines? A. I do not think it would here; we do not rely but very little on the laboring class of people who form those hours; our heaviest travel is at 6 o'clock at night; but our travel is not heavy at 7 in the morning or between 6 and

7 in the morning; our heaviest travel is between 11 and 3, and 5 and 7; that represents the shopping and lunch hours; with very good travel between 3 and 5.

By Mr. Rosendale:

Q. Is it the fact that the business men, as a rule, waik to their places of business in this city—the general rule? A. Yes, it is; being down hill, a great many walk down and ride up for luncheon, and at the close of the day; the conditions here are very peculiar.

By Mr. Gleason:

Q. Referring back to your statement about the accident to that child; take it on your hill where your steepest grade is, with everything in good order, how long does it take to stop a car? A. Fifteen feet, going at an ordinary rate of speed.

By Mr. Nixon:

- Q. Do you use any special construction by way of brake on account of the grade? A. Yes; on the hill here we use what we call a dog or trailer.
- Q. That operates in some way? A. Yes, sir; we are now trying another emergency brake.
- Q. This dog you use in going up the hill? A. Yes; in case of any accident the motorman drops the dog which holds it.
- Q. What do you use in descending? A. The ordinary brake and the power; emergency brakes we have tried here and they have failed miserably; the trouble is this; that anything that is used only in case of emergency gets out of order; the only kind of brake that will be of an use is something used sufficiently to keep it in proper condition all the time; we are now experimenting with, and I think we will adopt, an emergency brake that will take the place of the dog, in coming up the hill; then it will be in condition to be used all the time; we had a special brake, and after running a year we found it impossible to make it reach the track; it is so with all emergency appliances.

- Q. How long have you been connected with this road? A. Since 1884; but I was three years in a construction company doing some work for this road and some work outside.
- Q. Has this franchise become more valuable within that time?

 A. I think it has.
- Q. Do you think it is a good idea for the State to give perpetual franchises? A. I do not know that I am competent to judge that.
- Q. You probably would say it was, now you have them; do you think if the city was going to grant any further franchises here they should be perpetual? A. No, I do not think they should, but I do think that people who are pioneers and spend their money in the first place are entitled to some consideration more than the people who go in now and get the benefit of their experience.

Recess until 2 p. m.

AFTERNOON PROCEEDINGS.

John J. Lawlor, called and sworn, testified:

By Mr. Gleason:

- Q. You reside in Albany? A. No. 315 North Pearl.
- Q. What is your business? A. Motorman.
- Q. In the employ of the Albany Railway Company? A. Yes, sir.
 - Q. And how long have you been? A. Six years next June.
- Q. Have you had any experience in the operation of vestibule cars? A. No, sir; I never ran one.
- Q. Do you think that a vestibule would be a means of protection to a motorman in the discharge of his duty? A. I think so.
- Q. Do you think that the use of a vestibule would in any way impair the safety of a car on acount of being an obstruction to the view of the motorman of what was in front of him? A. That I do not know; I never ran one; I don't believe I could answer that question.
- Q. You think it would be a protection from inclement weather?

 A. I think so.

- Q. Do you think that if a vestibule were used in which there was a glass window or anything of that kind that a motorman could operate a car with the windows closed and be able to discern whatever was in front of the car in advance? A. Why, I think he could; that is my opinion.
- Q. How fast do you run your cars? A. Eight miles an hour through the city is the limit.
- Q. How are you able to judge whether or not you are running that rate of speed or a greater rate of speed? A. The schedule time; it is not laid out as fast as that through the city.
 - Q. You judge from your time card? A. Yes, sir.
 - Q. From street to street? A. Yes, sir.
 - Q. Do you use any fender? A. Yes.
 - Q. Do you use any wheel guards on your cars? A. Any what?
 - Q. Wheel guards? A. That little pilot underneath?
- Q. A wheel guard is supposed to be a protection preventing the wheel from striking anything? A. They have it on some cars attached to the fender.
- Q. What kind of a fender do you use? A. I have seen four different kinds on my division, the Spencer fender and two out-oftown fenders.
- Q. Do you consider them a protection to a car? A. I don't consider them much protection; no.
 - Q. Did you ever have an accident? Yes, sir.
 - Q. Did you have a fender on your car at the time? A. No, sir.
- Q. Don't you think a fender a protection in case of a child's getting on a track, or anything of that kind? A. Yes, a good fender; but I don't think they have that here.
- Q. What make of fenders do they have here? A. I do not. know that; I do not know who makes them, only one fender that I know, they called the Spencer fender, right down from the top of the dash; it goes right down to about three inches from the ground.

By Mr. Rosendale:

Q. How far does it extend out from the car? A. Five or six feet.

Q. Have you any questions you would like to have asked?

Mr. McNamara.—I think the experience of all these motormen is the same; we never had an accident on a car that happened to have a fender on it.

By Mr. Rosendale:

- Q. Have you ever seen a fender that you thought would meet what is expected of a fender? A. No, sir; I have not.
- Q. You have seen a good many, I suppose? A. Yes, I have seen a few.

William N. Smith, called and sworn, testified:

By Mr. Nixon:

- Q. Where do you reside? A. North Albany.
 - Q. What is your business? A. Motorman.
- Q. In the employ of what company? A. Albany Railway Company.
- Q. Did you ever have an experience in the use of a vestibule car? A. No, sir.
 - Q. Have you ever seen one? A. No, sir; not that I know of.
- Q. Do you think there is any liability to accident by having protection of a motorman during inclement weather that could be obviated by the use of a vestibule in front of the car? A. They are all enclosed, are they not?
- Q. They are closed and then there is a window that can be raised and lowered; the woodwork comes up about the height of your motor. A. I should think they would be a nice thing on a cold winter day.
- Q. As a motorman, do you have to turn any switches or anything of the kind; I notice motormen on cars turn a switch or frog? A. We have only one and that is up in Troy.
- Q. Would a structure similar to what I have described, termed a vestibule, interfere with that labor? A. I should think that would interfere with it; I never worked on one of those cars, and I couldn't say, and I don't know exactly how they are.

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Q. These men are hardly capable of telling the difference between a vestibule car and the other car; in other words, from the standpoint of a motorman, it would be for you to decide as between no protection at all and being placed within an enclosure where a window was lowered which would subject you to a very severe draft; that seems to be the question with the motormen; they claim they had rather be left without any protection than to be placed in a position where excessive draft strikes them as from the opening of a window? A. Certainly.

By Mr. Gleason:

- Q. You keep your platform closed entirely so no passengers can stand on the platform? A. No one is allowed on the front platform.
- Q. The front door is opened and closed by the conductor? A. That is all.

By Mr. Nixon:

- Q. In running upon your route here, within how long a distance can you stop a car? A. You can stop them within a very short distance.
- Q. What distance? A. You can stop them within the length of the car I should think.
 - Q. What is that, 16 or 18 feet? A. Yes; 20 feet.
- Q. How fast do you run? A. We run, in different places we run faster.
- Q. You have two rates, as we understand it; in a certain limit, 8 miles, and 12 miles outside of the city limits? A. Yes; north of Clinton avenue we run faster.

Mr. Rosendale.— He also runs between here and Troy; and you can run 20 miles an hour.

- Q. Could you run any faster on that line with safety? A. I think so; oh, yes.
- Q. You think the regulations covering the rate of speed are reasonable? A. Yes.
 - Q. And that they provide protection to pedestrians? A. Yes.

By Mr. Fassett:

- Q. How long have you been driving for this road, the Watervliet Turnpike Company? A. I commenced working for the Watervliet and Turnpike Company, I think, in 1862 or 1863; I think 1862.
- Q. You drove on the same road then a horse car that you now run a motor car on? A. Except that we run Broadway.
 - Q. Yes; but you ran to Troy? A. Yes.
- Q. What have you got to say about the fact of running the horse cars or a motor car can you protect yourself better now? A. Oh, yes; I can protect myself a great deal better now than with horses.
 - Q. You do not suffer as much with cold now? A. No, sir.

By Mr. Nixon:

Q. How do you explain that? A. When you have a span of horses you can't bundle up the way you can with a motor car; you can bundle yourself up now with a motor car a great deal better; you could not with horses.

By Mr. Rosendale:

- Q. If there was frost on the glass how would it be? A. If there was frost on the window you would have to look out the window; if you could see out of the window it would be all right.
- Q. In this climate here we have many days where the frost is severe? A. Yes, sir.
- Q. When the windows in the vestibule would be apt to be frosted? A. Yes, sir.
- Q. And so in a snow storm it would obstruct the vision? A. Yes.
 - Q. And also a severe rain storm? A. Yes.
- Q. So what you meant was, it would be more protection from the weather for the motorman if there was a vestibule with glass on top? A. Yes, sir.
- Q. But as to being a safer car to run and manage, how about that? A. I can not say; I should think it would be as safe.
 - Q. You think it would not be? A. I do.

Edgar S. Fassett, recalled, testified:

By Mr. Nixon:

Q. You may state what your experience has been. A. From the start of the fender question we started in to try and get a fender which would meet, first, the requirements of the ordinance that we have, and next, what would be what we considered safe: the first car was equipped with a fender supposed to comply with the ordinances, and with cars equipped that way we killed two children, both of whom were ground to death with the fender and both of which we thought might have been saved if the fender had not been on; it was shod with wood and sheet-iron guard and went around the entire car and close to the pavement as could be run, and was rigidly attached to the truck of the car: it ran under the car and in front of it; after our trial with that we concluded we had rather take the chances in not complying with the law and took them off; we were advised that that was a good fender; we started in to experiment with fenders of different makes; every man that ever came to me with a fender I gave him a car to put it on, and I would let him take a car and build a fender, and with those different fenders we experimented on dummies; the dummies consisted of bags of stuff, and sometimes they were more elaborate, and one was a framework of wood stuffed very much like a man; it was the size and form of a human being and we tried it standing up and sitting down and lying down, and we have never tried a fender yet that we did not succeed in running over; I think we have tried between 30 and 40 fenders; I think we have several fenders we have put on and run right along on our cars, thinking we might possibly have a chance to use them: all of those fenders except two have broken to pieces on the car: if a dummy is put right in the center of the track and standing up, almost any fender will catch it, and some dummies if laid right across the track at right angles, some will catch then; if you put the fender one side or lay the dummy partly on the track and partly off, the fender will in every instance place them around under the wheel; the dummies were thrown against the

car with such force and one of the coroners who noticed one of the experiments said a man would want a tire on his head to save his life; that has been the uniform experience of the fender test; I have been to Troy to see the test made in Troy and it has been universal, a man could stand the dummy where the fender would pick it up; while we took it and would put it in a position that a man would be liable to be struck and the fender would be of no use.

By Mr. Gleason:

- Q. Have you seen the fenders adopted in the city of Passaic, New Jersey? A. Do you know the name?
 - Q. I did. A. Is it the Derrick fender?
 - Q. No. A. The Providence fender?

By Mr. Rosendale:

Q. In this connection tell the committee what, if any authority, you have in respect to fenders? A. I have authority from the executive committee to make experiments with every fender given and spent the necessary money.

By Mr. Nixon:

Q. In other words, your company is prepared any time and you have authority through the executive committee to supply any safety appliance to a car that will protect the public in the way of a fender? A. Yes.

By Mr. Gleason:

Q. You can not make experiments with a dummy that will compare with a person on the track that is always moving? A. That is true; the only thing that we can do is to place them in the most conceivable position; I have endeavored to learn how every accident occured, and the position the person was in when struck, and we have found in almost every case they were struck by one side or the other of the front of the car; in only one case was a man struck by the front of a car, and we thought he committed suicide—bowed down and let the car hit him.

By Mr. Nixon:

- Q. You said you could not give the exact cost of heating a car; you said you were going to make some tests soon? A. I am not properly heating our cars now; we had an accident in the power house, and only have two-thirds power now.
- Q. How would you go to work to compute it? A. We know the average current heated by the heater is seven ampheres per car.
- Q. How do you ascertain that? A. We would put on a watt machine which would show the entire cost per day; then we would figure up the cost of generation; we know the ampherage is much greater in winter than summer.
- Q. I wish you would let me know when you figure that up? A. All right, I will.
- Q. Did you ever figure what it cost you per mile to run your cars? A. Yes; the cost of operation per car mile, excluding fixed charges, 15 9-100; including fixed charges, 18 97-100; that is for the month of October, 1895; this differs different months; we have had it as low as 11, and we have had it as high, in some of the winter months, as high as 21; that includes heating and everything.
- Q. Do you, in figuring up the monthly statements of your business, figure out what it cost you per car mile for passengers? A. No, sir; we have no means of knowing the mileage of the passengers; that is a very hard thing to ascertain in a street railroad.
- Q. I have heard it stated that a street railroad could not afford to carry a passenger more than five miles for 5 cents, but we have been unable to demonstrate that fact by demonstration. A. You could not get such data.
- Q. To take the season of the year when you have large traffic and then again when you have few passengers and the expense would differ? A. Yes.
- Q. Did you ever make any study of the question of municipal ownership of railroads? A. I have not.
- Q. In your judgment, could the corporation that you are connected with be operated by the municipality to greater advantage

to the citizens or the city than it can be by the local company? A. I would not think it could.

- Q. Do you think the municipal ownership of railroads in Albany would be liable to get in politics? A. I do, yes; I know the class of men that come to me every time there is a change in politics; I know they seldom last over two months, if they get on at all.
- Q. I do not think of anything else; if there is anything you would like to speak about we will be glad to listen? A. I think some time ago when there was some talk about municipal ownership of the electric light plant, there was some comparison between the cost of generating certain horse power between the pumping station of the water works and the Albany railway, generating four or five times the amount; it was shown the Albany Railway Company was generating their power for something like 50 per cent. of the municipal water works.
- Q. I hardly think your light plant would like their power cost compared with cities that generate their power?

By Mr. Rosendale:

- Q. You have kept yourself advised with reference to fenders? A. There is no trouble about that
- Q. According to your best judgment, how many fenders are now patented, or being constructed, as far as you know? A. I have understood there was betwen 1,800 and 2,000 in the patent office, and I know we have tried at least 20 that are not yet patented and probably never will be.

The committee took a recess subject to the call of the chair.

The committee convened at the City and County Hall, in the city of Buffalo, on Monday, December 23, 1895, at 10 a.m.

Mr. Milburn.—Before any steps are taken I would like to make a very brief statement to the committee in regard to the present situation of affairs; a short while ago there was filed in the Secretary of State's office, articles of incorporation of a new company known as the Buffalo Traction Railway Company, proposing to lay

a system of street railways in this city, occupying 66 miles of streets, of which 35 of them are parallel lines with the existing tracks of the old company; they made their application to the State Board of Railroad Commissioners for a certificate, and they also made their application to the common council for the grant of the public right to occupy those streets; since that time the whole of our attention and energy has been directed to the controversies growing out of that state of affairs; we have had a long and very deliberate hearing before the State Board of Railroad Commissioners and the evidence is all in, and that matter stands for hearing and argument next Monday in Albany, and it devolves upon me before that time to go through, not only the whole of · the testimony that was taken, but a great mass of documents of every kind and nature which were just marked and shoveled in before that commission; the officers of this company have been under the strain of that investigation in preparing material and appearing as witnesses and furnishing me with all the information that I needed of going over this system with experience and expert street railroad men from various parts of the country. ter is proceeding before the common council; it met on Saturday and meets again this afternoon when the whole question of the grant comes up. When the subpoenas were served was the first time that my attention was brought to the subject matter of this investigation and to the hearing which was to be prosecuted. Box has known more about this street railroad system than any other human being, having been with it from the time it was a single road on Main street so far out, and a single road on Niagara street for a certain distance, and his time has been occupied and absorbed in all the various questions that have been brought up by this new company, and threatened in the most vital may by this system of paralleling a client who is more than a client to him, through this long connection. Now, I took the matter up with such time as I had, after I heard it when I was requested to cooperate in the representation of the company before this committee, and I found that at the last hearing, or when you were here the suggestion was that certain matters would be formulated

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concerning which this committee desire information, and that we would furnish under oath full and satisfactory answers to these interrogatories with all the proper information which, by the way, I may say, is a course which has been pursued before an important committee in which I have been concerned, before the inter-state commerce commission. They prepared a list of interrogatories, and made that the basis of the investigation, asking the companies to furnish all the information called for, which was done. I understand, there has been reliance placed upon this idea at the time it should be fixed upon by the committee in its own convenience it would furnish the company a list of matters concerning which it wished all the information which this company has in its records, in its archives, and in its documents and papers. Now, it is a most embarrassing complication to me, owing to Mr. Box's engagements and all the matters on his hands, to personally go into this matter at the present time. In fact, all of us have been occupied, as you might say, night and day. I have never in my professional experience, and I have been connected with many important matters, had a matter come up that had so many sides to it and so many phases to it to occupy a man's attention. new compay have a little bureau and they are leaving no stone unturned, and, of course, that situation has to be met, and it is considerable of a draft on the energy of any man. I have matters now, to-day and to-morrow, apart even from the preparation of this argument before the street railroad commissioners, to which I should give my attention, not only during to-day, but during tonight I should have to do it. Now, I do not wish to ask for anything unreasonable. I would like under these conditions which I present to you, if you would furnish us those questions either while you are here now on the very subject which you wish information, and I will personally undertake to you gentlemen to have Mr. Box sit down and furnish you under oath of our officials the most complete information that you wish on the subject. Any one who can go on to the stand on these various matters, they are usually matters of detail to be found in books and archives, would be embarrassed in answering these questions.

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one of you gentlemen can tell if you had been engaged in a matter like this which has been a matter in 1890 with 86 miles, and 1895, 146, carrying in 1890, 10,000,000, and in 1895, 45,000,000, with all these things, with all that data distributed through a mass of documents and papers which no man can carry in his mind and which no man can answer intelligently without reference to those papers to that date. Any one going on the stand here would require that such questions as you would ask, time to compile the information, which would be a proper answer to a question that was put. Now, my request which, I treat you, gentlemen, just as I would treat any court in the land and make just such a request to you as I would make that court, is, that you do take time here to formulate those questions and we will go at once at the preparation of those answers, under oath, and then when you have gone over the matter, if there is any point in regard to which you wish any information I will produce the witnesses that you desire, here or anywhere else, at once. But, it seems to me, with that basis, you will have the information which you wish, and really, it is not a matter which any man can give right out of his head or without reference to the data and materials in the office.

Now, here is this meeting of the aldermen this afternoon. The council, as Wednesday is Christmas day, the council meet to-morrow, and there are a whole mass of matters which really require me and Mr. Box to be where we can be consulted with by a number of people. I feel, myself, as if I have just as much upon me as I can stagger under, and I am a pretty stout fellow at that, and can bear about as big a burden of work as any man I know. I confess I feel it. I have been going steadily all day long, and the Commissioners here would work us at night from 8 o'clock to 10.30.

Now, Mr. Chairman, I know what you want is just the information, the facts. I am here to facilitate your getting that information and those facts, pledging myself personally to you that it shall be given to you fully and intelligently and connectedly. If you will get together and formulate those questions for us, and we get up our replies intelligently for you, and then if you want any officer I will produce him wherever you want him, here or anywhere else;

if you think the information is not sufficiently full, and that information shall be furnished to you under the oaths of the officers of the company; and I should very much like the matter to take that course.

If this was an ordinary season, an ordinary time, and my engagements, or all of our engagements were only the ordinary engagements, I should not have a word to say, and I would be very much gratified and perfectly willing to sit down here and go over the testimony, and make any such notes requiring information to look up those matters and have them submitted. But I believe this course will facilitate matters if you gentlemen will occupy your time in framing your interrogatories concerning which you wish answers, and with an assurance on our part by a day that you may fix of answering those interrogatories fully. I feel very earnest for the committee to take that view of the matter. I appeal to the committee to take in concern my personal situation, and I also beg the committee to also remember that these gentlemen have rather expected that the matter would come up in the form of questions sent to them where they could compile this information. Take Mr. Littell here, and I have not had more than an oppportunity of ten minutes talk with him, and I know he could not give you a great deal of information; but Mr. Littell knows where it is and can have it compiled, and which he has been expecting to do. ask, and I think as the just course in this matter, and I should be very glad to have the committee acquiesce in this course.

Mr. Wade.—Now, Mr. Chairman, there are certain difficulties in the way of granting the application in full as it is made here by the counsel for the railway company. The work of this committee, so far as the taking of testimony is concerned, will end with the present month. Some time in the summer the committee came here for the purpose of investigating this railroad, and pursued its inquiry to a considerable extent; in fact, as far as it could be done with the officers and agents of the company that were then in the city. The president and general manager were away, and certain inquiries then propounded the witnesses were unable to answer that were then produced, because of the official position

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which they then occupied, or he occupied. I think there was but one official; he had not the information that will enable him to answer the question. I did say to the counsel of the road at that time that I would formulate a few questions that I desired them to look up and be prepared to answer, and from here we went elsewhere, and the committee since the first of October has been, as we all know, busy in other localities spending most of the time, and that matter had actually escaped my mind and memory until referred to, but I recall it that I did agree to furnish Mr. Box with certain inquiries.

Now, it seems to me that the most this committee can do would be to go on, and if it occurs that a question is propounded that Mr. Littell or Mr. Watson can not answer right here, I apprehend there will be a few, he can take that question and furnish the answer to incorporate in his testimony, and in that way it will enable this committee to conclude its work. This is our last sitting. When this examination is concluded this committee is confronted with the proposition of making its report to the Legislature and making such a recommendation for remedial legislation as it sees fit. The time is short. The fact that the parties were away from this city last summer has necessitated at this time, and I do not see where the committee could have returned at any other time, unless possibly last week, and that would have made no difference.

Now, if we can go on, there are certain features about the operation of this road that this committee would like to inquire into. The gentleman who is at the head of this company, that is the general manager, is, perhaps, one of the best railroad men in the State of New York; perhaps as familiar with the operation of roads as any man in the State of New York; an experience that covers years, and his information on this subject undoubtedly will be valuable to the committee, and it seems to me that if we go on in that way that we can do so without embarrassing anybody.

Now, so far as controversies are concerned between two contending companies, this committee has nothing to do, and I do not need to say this to the committee that we have absolutely declined everywhere where there was a local controversy, and refused to have anything to do with it; and I think the committee acted wisely, and we have no battles to fight here in Buffalo any more than New York or Brooklyn, or anywhere else, and we do not wish to embarrass anyone in that respect. The information we require here Mr. Littell, I apprehend, will be able to give us very promptly. There may be some questions about the capitalization of the company and the methods by which it was paid in, that the witnesses may not be able to answer, and that was one of the things that I agreed to furnish interrogatories upon and the amount of money paid into the companies.

Now, if you will furnish the testimony in that respect, in a few minutes I can ask the questions I desire, and after that I am perfectly willing to take the interrogatories. Now, if the committee concur in that view, Mr. Milburn, I am willing to do this for your accommodation.

Mr. Milburn.—Mr. Chairman, the suggestion of the counsel of the committee seems to be a very apt one, and which furnishes a way out. We will only leave the question of our personal attention to the matter which I can take care of, and that will do. I was more embarrassed about the proposition of going into matters with which I was not familiar with myself, and I know the witnesses would not be ready now, and on the suggestion that those questions just be left and we may prepare our answers under oath to go into the record, which I will personally attend to, I do not see why we can not go on the lines advocated by Mr. Wade.

Mr. Wade.—I apprehend there will be no difficulty.

Mr. Nixon.—We realize what your position is. We realize, especially those who live in the western end of the State, what a contest you are having with the company who are having a contest here; but at the same time, as Mr. Wade stated, when we came her in July or August, we came with the disposition and desire to complete our investigation as far as the city of Buffalo was concerned. We informed the railroad, of which you are the able counsel, we were coming, and asked the officers of the company to be present. Mr. Littell was in Europe, and Mr. Watson away somewhere, and we were unable to complete our investigation.

This is the last week under the resolution, without an extension, in which we can take evidence. As the counsel of the committee stated, it has not been the desire of the committee, when we have been in any municipality where there has been a local controversy over a question, to resolve ourselves into a court. We have endeavored in our investigations to follow the scope of the resolution on the lines proposed in it. There are some things in your system that are different from any system that we have met with. Your transfer system is different. Your system is the only one on which on the entire lines there is a percentage paid. This the commit-There are questions, also, in relation to the tee have considered. capital stock and indebtedness. I believe it is the disposition of the committee, and, in fact, I know it is, to deal fairly with your company and not embarrass it; but questions will be asked on those lines, and if, in your judgment, you are not prepared to answer, then the committee will decide whether or no to take the course you desire.

H. H. Littell, called and sworn, testified:

By Mr. Wade:

- Q. You reside in Buffalo? A. Yes, sir.
- Q. And you are connected with the Buffalo Railway Company?

 A. Yes.
- Q. In what capacity? A. I am vice-president and general manager of the Buffalo Railway Company.
- Q. How long have you occupied that position? A. Since June, 1891.
- Q. And at that time how were the cars of the company operated? A. All of the cars were operated by horse-power excepting two; we had a little line out on Forest avenue where we were experimenting with electricity; three cars were equipped with electricity, and we were running two of them.
- Q. Since that time you have changed the motive power on the entire system to electric power? A. Yes, sir.

- Q. And what has that change involved? A. The reconstruction of the tracks entire, the building of power-houses, buying new cars, motors, erecting buildings and car sheds, putting up poles, wires and putting in conduits for feeders underground.
- Q. Were you compelled to rebuild the road entire? A. Yes, sir.
- Q. You found that the construction for the horse-car lines inadequate for the traffic of electric cars? A. Entirely so; you might say that we had some of the lines; one line that was being prepared for electricity, or partly prepared and rebuilt before I came here was built too light and entirely reconstructed and neavier rail put in; Niagara Street and several other lines were built in the first place too light, and reconstructed.
- Q. What weight of rail do you use? A. We have been using 94 pound; the last we got was 98 pounds to the yard.
 - Q. Girder rail? A. Yes, sir; 9-inch rail.
- Q. And what kind of ties do you use? A. Yellow pine ties, known as Georgia pine.
 - Q. Your construction is over-head trolley? A. Yes, sir.
- Q. And do you carry all your feed wires under the surface?

 A. No, sir; not all of them; we have some overhead feed wires.
- Q. What system of return current do you use? A. We have in the Niagara Street, in the conduits, we have 1,000,000 circular mills copper wire, to which all four of the rails are attached about an average of about 400 feet at every man-hole; the rails are 9-inch rails, and double bonded with copper, and then there is the supplementary wire running parallel to each wire, also attached to these bonds; then we have, through Fargo avenue and down through Virginia street, another return-current wire of 500,000 circular mills, and it is double bonded.
- Q. Is that underground? A. Yes, sir; then through Ferry street, running across and taking in the upper part, another pair of copper wires; then on Niagara street, above the power-house, we have been putting in what is known as the Edison-Brown system of digging a trench and putting down rails, with this new

plastic bond and taking the current from pipes near the power-house, and carrying it back to the power-house.

- Q. What kind of a pipe? A. That one is from the natural-gas pipe.
- Q. Attached to that? A. Yes, sir; and carrying the current back; and we also have the same system in through Plymouth avenue, to take the current through the water-pipe, to take in stray electricity that might escape, to carry it back to the powerhouse.
- Q. Have you had any complaint from injury to the gas or water mains? A. Yes, sir; we have had some complaint from property owners and residents in the near vicinity of the power-house; none of recent date, since we have made these last connections.
- Q. The most modern system of returning the current would not resort to the use of any water or gas main, would it? A. I think this last we have is the most modern'; this taking it from large main's prevents electrolosis; we do not attach the pipes to carry it at any places, but only to take it off; it is where the current leaves the pipe that produces electrolosis, not where it comes onto it.
- Q. In some systems they have used the mains as a conductor for returning the current? A. So I have been told.
- Q. And there they have begun to complain of electrolosis from the destruction of the pipe? A. Yes, sir.
- Q. You have no overhead return system? A. No, sir; we are going to put in a little overhead system, but it comes over to the point where our conduit is, so as to carry it back, so as to reach another part of the system.
- Q. At the time you became vice-president and general manager of this company, what was the extent of the trackage? A. Will you allow me to refer to a memorandum?
 - Q. Yes, sir.

(Witness refers to memorandum.)

- A. I think I have that in my pocket; there was 63\frac{3}{4} miles in round figures.
 - Q. That is the amount of single track? A. Yes, sir.

- Q. Including sidings and switches, etc.? A. Yes, sir.
- Q. Since that time to what extent have the lines been extended? A. Before answering that question I want to state there are two companies here; practically one, but there is to-day 146½ miles of trackage in the system; we speak of them as one company, but there are two.
- Q. I understood when we were here before that the two were consolidated? A. Practically so, but not in reality; but they are operated as one company, practically.
- Q. What are the two companies? A. The Crosstown Street Railway of Buffalo and the Buffalo Railway Company.
- Q. The Buffalo Railway Company was organized, and purchased or in some way acquired the then existing systems? A. Yes, sir.
- Q. Of the several companies? A. Yes, sir; that took place before I came here.
- Q. And that is the company of which you are the vice-president and general manager? A. Yes, sir.
- Q. And the other company? A. I am the president of the other company, the Crosstown Company.
 - Q. And also its general manager? A. Yes, sir.
- Q. So you are familiar with the operations of the entire system? A. Yes, sir.
- Q. Now, at the time you made this consolidation, this 63\frac{3}{4} miles of track was owned by several other companies prior to that consolidation? A. Yes, sir; prior to the purchase or consolidation.
- Q. And did they have a transfer system at that time, do you know? A. Yes. sir; they did have until long after I came here a transfer of this kind—where a person paying 8 cents got a transfer; they charged 3 cents for a transfer; there was no free transfer.
- Q. And since you have put the company in operation, as now operated, you have put this in, as I understand, a general transfer system? A. Yes, sir.
- Q. So that wherever one line connects with a branch or another, a person is entitled to a transfer ticket that carries them over that line? A. Yes, sir; it makes about 275 different transfers.

- Q. Points? A. No; different transfers; there is a good many different transfers made at the same point.
 - Q. How many transfer points? A. Fifty transfer points.
- Q. That is virtually another transfer point, if you transfer three different directions, it is virtually three transfer points? A. Yes, sir.
 - Q. You have about 250? A. About 275 to-day.
- Q. Yes; of different transfers; and have you any place on your entire line, Mr. Littell, where it branches off from a main line, or connects with another line, that you do not furnish a transfer? A. No. sir; in some places some parties will get two, three, and possibly four transfers, if they so desire, and want to take a journey around the town.
 - Q. So you issue a transfer for a transfer? A. Oh, yes.
- Q. Now, how far, supposing I wanted to ride as far as I could on your line, for 5 cents; what would be the greatest distance that I could ride; are you able to tell me?

Mr. Milburn.—Take, for instance, the Black Rock line.

- A. I can not answer it positively correct, but I should say you could ride in a continuous direction, 11 or 12 miles; but in a great many cases people do get a transfer and come back; we do not intend to bring them back, but we can not draw the line.
- Q. To the end of the line? A. Not to the end of the line, but get across; it is not the intention of the company to allow them to do that, but we can not draw the line.
- Q. How many passengers are you carrying a year on your road? A. The fiscal year ending June 30, 1895, we carried 44,964,609; that includes the transfer now.
 - Q. That is, practically, 45,000,000? A. Yes, sir.
- Q. And how many of those were transfers? A. About 12,000,000 in round figures; probably a little more than that; shall I give you what we were carrying in 1891 when I came here?
- Q. Yes. A. The fiscal year ending June 30, 1891, we carried 17,408,102.
- Q. Can you give the number of transfers in that year? A.I can not; the transfers were paid in that year.

- Q. The transfer was three cents then? A. Yes.
- Q. Upon what streets do you have the heaviest traffic? A. Our heaviest business is on Main street.
- Q. And extending from what point on Main street to what point? A. The greatest amount of business would be between Seneca and Allen street.
 - Q. Seneca is near the Terrace? A. Yes, sir.
- Q. And Allen street is how far north of there? A. About one mile, in mile, in round figures.
- Q. How many different lines come in on to Main street and run over the Main street tracks there? A. Between the Terrace and Niagara street we have pardon me until I refer to this memorandum; it will take a little time; (witness refers to memorandum); there is between the Terrace and Niagara street, there is ten different lines.
- Q. And does the number decrease from there as you go north? A. Yes, sir; between North Division and Eagle streets there is only six lines.
- Q. So that on the Main street line from the Terrace to Niagara how many cars pass over that street daily? A. I think between Main street—
 - Q. Your Niagara cars run on that line? A. That is right. (Witness refers to memorandum and makes computation.)
 - I think there is 171, to the best of my figures.
 - Q. One hundred and seventy-one? A. Yes, sir.
- Q. And your street traffic is more congested there than at any point in your system? A. Yes, sir; more cars pass over that between the Terrace on Main street.
- Q. At what hours in the day is your street car traffic the heaviest? A. On most of the lines it is about six o'clock.
- Q. In the morning or evening? A. In the evening; on some of the lines it is in the morning, a few of them.
- Q. You get more traffic morning and evening for a given length of time than any other time in the day? A. Oh, yes.
 - Q. A heavier traffic? A. Yes, sir.

- Q. People going to and from their various occupations, I suppose? A. Yes.
- Q. What requirements or what conditions does the city impose upon your road for the occupation of the street; what do you have to do? A. Some of our tracks we have to keep in repair between the tracks only, between the rails only, and some of them, or a very much larger percentage of them we have to keep between the tracks and for two feet outside of the outer rails.
- Q. And you have to pave when it is ordered there, or repave? A. Yes, sir, we have to keep them up all the time; and then we have to pay a percentage to the city which is now at the rate of $2\frac{1}{2}$ per cent., and when our combined revenues of the Buffalo Railway Company and Crosstown Railroad Company reach \$2,000,000 a year, then we have to pay 3 per cent. of our gross receipts to the city.
- Q. How near does it approach to the three millions? A. For the fiscal year ending June 30, 1895, our receipts were I can not give you exactly, but it was a little over \$1,600,000; I can not give you the exact figures.
 - Q. So you are paying $2\frac{1}{2}$ per cent.? A. Yes, sir.
- Q. Forty thousand dollars a year? A. Yes, sir; it is more than \$40,000 a year.
 - Q. That is paid in cash to the city? A. Yes, sir.
 - Q. In one payment? A. In one payment.
- Q. And the fare which you charge is a five-cent fare? A. Yes, sir.
- Q. Entitling the party to a privilege of transfer which you have spoken of? A. Yes.
- Q. How long have you been engaged in the street railway business? A. Thirty-one years last November.
 - Q. And have occupied various positions? A. Yes, sir.
- Q. So you are familiar with it in all its phases? A. Fairly so; I learn something every lay.
- Q. Mr. Littell, if you were drafting a new law governing street railway companies, would you do it, including a requirement of

the railway company to pay to the city into the treasury annually a certain sum for the use of the streets? A. No, sir.

- Q. Would you leave the company entirely free to make any sort of a profit upon its investment that it might be able to, or would you have something to regulate within some manner? A. I think it is right to regulate it to a certain extent.
- Q. What do you thing is the best method of doing that, best for the city and best for the railroad company? A. My opinion is that there is nothing that builds up the city or does so much for a city as a good street railway system.
- Q. Do you think it better economy to take care of that question by reducing fares when the conditions will admit of it, or keep the fares up and pay into the city treasury? A. I do not think that a street railway company can afford to carry people for a less rate of fare and give transfers as we give them here than we are doing it at the present time.
- Q. Assume, for the purpose of my question, that the conditions are such that our company might, by charging the five-cent fare, pay 3 per cent, to the city and then pay a good dividend upon its investment and all fixed charges including the repair of the streets, do you think it would be better to pay that \$40,000 or or \$60,000 into the treasury of the city, than it would to reduce fares so that the revenue of the company would be reduced that amount? A. I think that the people should get the benefit of it, the traveling public or the the poor man, if there is any benefit to be had; that the man that patronizes the company should have the benefit and not the property holders.
- Q. You take the city of Buffalo and you have people working here like other cities, working for \$4 a week and upwards in shops or stores or factories, that are obliged to use the road to go to and from their work; don't you think it would be better economy for the city at large to give that class of people all the benefit there is in it than to make them pay a higher rate of are, and then the company pay into the city treasury and use that money in reducing the tax on the wealth of the city? A. Yes, sir.
 - Q. You know to-day the law is such that a company can not

increase its capital stock without the consent of the railway commissioners? A. Yes, sir.

- Q. And yet it is permitted to issue any amount of bonds that it may see fit? A. In excess of its capital stock? A. Yes; without consulting the railway commissioners at all; they have nothing to say about it. A. I did not know that.
- Q. Do you think it would be a good provision of law to require the assent of the railway commissioners to the issuing of bonds as it does to the increase of capital stock? A. Yes, sir; I think it would be right; I think it would be well for all matters in the extension of building of a road in the issuing of bonds to be submitted to the railroad commissioners.
- Q. You can incorporate your company to-day new and fix the capital stock at what you have a mind to, and no one would have anything to say about it; don't you think it would be well if the assent of the railway commissioners were required assenting to the amount of capital stock for which a railway company should be incorporated? A. Yes, sir; will you pardon me if I say something?
- Q. Yes, sir. A. It is a very difficult matter to get people to invest in railway securities at their face value; it is very difficult?
- Q. Yes, we know that; but, appeciating that condition, don't you think there ought to be somewhere some check upon it or some public official whose assent should be requisite to the issuing of the stock and bonds of these transportation companies? A. Yes, sir.
- Q. Particularly railway companies? A. Yes, sir; I think it ought to be in the hands of the Railway Commissioners.

By the Chairman, Mr. Nixon:

Q. Don't you think if the law were changed so the capital stock would be compelled to be paid in in cash that the stock would not be as hard to sell as at the present time; we have found a majority of the railroads in the State of New York have been purchased and re-equipped on a profit out of the bonded indebtedness, and the stock costs nothing; you can not expect people to buy that

stock at high figures; it is no wonder they do not buy railroad securities? A. That is very true.

Q. They have no means of knowing what their value is; they have no means of knowing whether your bonded indebtedness is going to be doubled or tripled, or how your stock is going to be manipulated?

Mr. Milburn.— Is the standing of municipal action one of the main features in the security?

- A. Pardon me; people are very much afraid of municipal and State legislation in all these matters.
- Q. Railroads all take good care not to have any State legislation?

By Mr. Wade:

- Q. If you were selling the bonds of your road to-day you would have, probably, to attach to that the verified statement of the actual cost of construction; you know that is frequently done? A. Yes.
- Q. The cash cost of construction; so the purchaser of bonds would know what your road actually cost and what you have got, but the fellow who undertakes to buy a share of stock, he does not know anything about it; now, this committee, in whatever recommendations it may make, is seeking the views of men like yourself, who have been engaged in this business for years and know all its workings; now, if you have, Mr. Littell, a defined idea of how the law should regulate the issuing of bonds and stocks by railway companies so that not to rob the railroad company or embarrass it, and on the other hand to protect every purchaser, I wish you would give it to us. A. I am not able to do that: I have not studied the question sufficiently; I have been trying to give to Buffalo a good street car service, and I have not had time to give much time to that question; I wish to say Buffalo is peculiarly situated, and it is not like New York and a great many larger cities; I presume you gentlemen found in your investigation that some of the New York surface railroads take in \$75,000,000 a year per mile of track; while, if you take the Buffalo system, and

we have taken in about \$11,000,000 a year per mile of track; so that different places have different conditions; in New York you haul a man a short distance for 5 cents, and in Buffalo you haul him a long distance.

- Q. For that reason, Mr. Littell, a general statute that would fit the place and properly regulate the road in New York and properly protect the people and the patrons of the road, might destroy your road in Buffalo? A. Exactly; that is why I mentioned this.
- Q. So that if the power of regulating these things was lodged in some State official, for instance, the Railway Commissioners, do you think it would receive at the hands of the board a fair adjustment of all interests properly considered? A. I do not doubt that it would; that is why I think it ought to be in the hands of a good commission, and I do not know of any other one than the Railroad Commission; all the parties would probably get justice there; I am sure they would.
- Q. During the five years that have just passed, for four years you have been putting in these extensions to which you have referred? A. Yes, sir; we have re-equipped all the track that was here when I was here, and have built more than 80 miles of additional track, and rebuilt all of the road and some of it has been rebuilt twice.

By Mr. Milburn:

Q. And you have never stopped the operation of your road in the meantime? A. No, sir; it was built at considerable expense from the fact that we operated the road while we were reconstructing it.

By Mr. Wade:

Q. And did you find that the cars in use by the horse car system were of no utility as electric cars? A. We used a few of the best ones, but we are now rebuilding those and stretching them out and lengthening them; the majority of the cars were dismantled and torn up, a great many one-horse cars and short two-horse cars; we have increased the — (witness refers to memorandum); we

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have increased the number of cars in five years 224 per cent., and we have increased the size of the cars about 35 per cent. in seating capacity.

- Q. Your largest cars run on Niagara street? A. Yes, sir.
- Q. What is the seating capacity of those? A. Thirty-four, allowing 18 inches to a passenger.
 - Q. And how frequently do you run cars on that line morning and evening during the time the traffic is heaviest? A. To Forrest avenue, when the traffic is heaviest, we run there in a minute and a half, and then we have three other lines coming in; one runs a car every nine minutes, one every ten, and another line during the heaviest travel there, three and one-half minutes; that is in addition to the regular Niagara street cars, so for part of the distance there is a car about every 80 seconds each way.
 - Q. How close together can you operate those cars with perfect safety? A. I think we could operate them without any difficulty as close as 400 feet.
 - Q. In time, what would that be? A. Ten seconds, at the best I could guess at it.
 - Q. So that you could run them ten seconds apart if the traffic required it? A. I think so.
 - Q. Do you have much complaint from the crowding of cars on Niagara street? A. Not lately; we have had some complaint.
 - Q. Have you been increasing the facilities there? A. Oh, yes, sir; very much; I would like to bring you up a chart to show you.
 - Q. I wish you would, Mr. Littell.

Recess until 2 p. m.

AFTERNOON PROCEEDINGS.

H. H. Littell, recalled, testified:

By Mr. Wade:

Q. Now, Mr. Littell, you have furnished us some charts here that indicate on the days that each represent? A. They are all one day.

- Q. That indicates the traffic and facilities for that day on all your lines? A. Yes, sir.
 - Q. The red lines represent what? A. The trips.
- Q. In other words, the capacity, and the blue lines or dark lines represent the transfer? A. Yes, sir; I want to say that those were not made up for you, gentlemen, but we make them up for our inspectors or sub-superintendents of the different lines to give it to them in order to show them how they operate their cars, and what the business was on that day, and enable us to meet the requirements.
 - Q. I believe I will mark those in evidence.

(Charts received and marked as exhibits).

Q. The one I show the witness now represents the entire line? A. Yes, sir; the entire system.

(Received and marked Exhibit 53.)

- Q. Each chart indicates the different lines of these other charts? A.Yes, sir.
- Q. Now, the charts pinned together represent the different lines, each chart representing what line it does represent?

(Received and marked Exhibit 54.)

- Q. Do you know, Mr. Littell, what percentage of earnings is required to pay operating expenses? A. It varies according to the seasons; we have operated down as low as about 50 per cent. and we run up to 60 or 70 in the winter time; averaging about 55 or 60 per cent.; I could not give you the exact percentage.
- Q. Do you have any difficulty from snow here in the winter times? A. Oh, yes.
- Q. What is the requirement of the railroad company by the city ordinances in reference to the removal of snow, if any? A. We are required to move it all, that we remove from the street level down, and a good proportion of it is carried away, some parts of it where it becomes too deep or the ridges reach too high.
- Q. During what season of the year is your traffic the heaviest? A. Our largest business is in the months of July, August and September, usually.

- Q. Can you, at this time, give us the actual cost of a road per mile of a single track? A. I can not; for different localities and different conditions makes the cost greater or less, as the case may be.
- Q. Have you any extensions in contemplation for the coming year? A. Yes, sir.
- Q. I suppose that the work is suspended during the winter season largely? A. Oh, yes; we can not do any construction now.
- Q. You became connected with this company after its incorporation, if I understand you correctly? A. Yes, sir.
- Q. And after it had acquired the lines it did acquire from the old horse-car companies? A. Yes, sir.
- Q. Your operations are all carried on under the name of the Buffalo Railroad Company on both lines? A. Practically so; they are practically operated as one system.
 - Q. Do you have a lease? A. We have a traffic arrangement.
- Q. This company of yours was incorporated at what time? A. I can not answer that, but I think it was in 1889 or 1890; I am not sure.
- Q. I presume the railroad report will show that; I think it appears, however; it already appears here, but I do not recall it; and it was capitalized at that time at \$2,500,000? A. I do not remember the figures because I was not here.
 - Mr. Milburn.— The Buffalo railway, is that?
 - Mr. Wade.—Yes.
- Q. I was looking at the average; I do not just recall it; are you familiar with the manner in which the stock was issued? A. No, sir.
 - Q. You had nothing to do with that feature of it? A. No, sir.
- Q. I suppose the books of the company will show that fact? A. Yes, sir; the State reports to the State will show that.
- Q. Mr. Littell, do you believe the street railways of the State generally could be operated as well under municipal control as under the control and operation of companies organized for that purpose? A. I think not, sir.

- Q. In your travels abroad have you investigated any of the systems of street railway that are under municipal control? A. No, sir; I did not go near them; I only saw it in operation.
- Q. Would you deem it advisable if the statute should provide for some official in each city who should have the power of investigating and knowing what the railroad companies in the city are doing and earning and how they are operated with power to give some directions in respect to transportation facilities? A. I think it would be very much better to be in the hands of a commission.
- Q. You believe the whole scheme could be taken care of better by a railroad commission? A. Undoubtedly, because different cities have different conditions and different distances to carry their people and laid out differently, and I think it would be much better; alaw governing one city might ruin the railroad in another.
- Q. You do think, if I understand you correctly, Mr. Littell, that it is advisable to enlarge the scope and power of the Railroad Commissioners in that respect? A. I think that all these matters should come yes, those under the hands of the Railroad Commissioners.
- Q That those officials should be appointed for a long term by the Governor of the State? A Yes, sir
- Q. How many men do you employ upon this road? A. I do not know the exact number to-day, but in round figures about 1,500, and when we are constructing tracks it amounts to about 1,800, and sometimes 2,000 men.
- Q. In the ordinary operation of the road you employ about 1,500? A. In round figures.
- Q. What wages do you pay? A. We pay our men by the hour; the motormen and conductors get 15 cents an hour for the first three months; for the next nine months they get $16\frac{1}{2}$ cents an hour, and after they have been employed by the company 12 months they get 18 cents an hour; this tends to enable us to keep the men with us, and encourage them to remain with us.
- Q. The idea is, that you get better service from experienced men? A. Oh, yes.

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- Q. Than you do from inexperienced men? A. Yes, sir; our shop men and painters and engineers and linemen and all that get different rates of wages.
- Q. About how many hours do your conductors and motormen work in a day? A. They are working from nine to ten hours, and 11 hours, some of them, and a few as much as 12 hours, but those are all relieved at meal time.
- Q. And is there any rule of your company that enforces more than 10 hours' work upon them? A. No, sir; we do not insist upon it.
- Q. Last winter, I think it was, a bill was introduced in the Legislature which prohibited the employment of any person upon a street railway line for more than 10 hours in a day; there was such a bill, was there not; it was absolutely prohibitory; do you think your operatives would favor such a law as that? A. I think not, sir.
- Q. Would you? A. No, sir; our operators prefer the long hours; that is, up to 11 or 12 hours; they get more money; and those particular runs that make that time are sought after and men prefer them.
- Q. Do you know, Mr. Littell, of any reason why service in that capacity should not be open to contract between employer and employe the same as any other occupation? A. No, sir, I do not.
- Q. Have you had any strikes on your road? A. No, sir; I have been in the street railway business 31 years, and I never had but one strike and that lasted about three hours; it was more than 25 years ago.
- Q. What would you think of investing the Railroad Commissioners with powers to determine controversies of that character? A. I think controversies of that character can be better settled by the management and the operatives probably than by outside parties.

By Mr. Nixon:

Q. By the parties directly interested? A. Yes; by the parties directly interested.

By Mr. Wade:

- Q. Mr. Littell, take your own road here, in a sort of a transitory state it has been in since 1890, can you tell about how much direct loss has been inflicted upon the company by the decline in the value of electrical appliances it purchased in the commencement of the electrifying of the road? A No, sir; I never figured it out, but it is quite a large sum.
- Q. You purchased motors in 1890 and 1891 at a price way in advance of what they are to-day? A. Oh, yes.
 - Q. More than four times as much? A. Four times over.
- Q. And that have gone out of use entirely? A. Oh, yes; we have not any motors that we had when we started; they are all off and replaced by more modern.
- Q. Now, in that, for instance, you purchased motors in 1890 or 1891? A. Eighteen hundred and ninety-one, I think
- Q. For \$4,000; assuming that is the price you paid; of course, that is charged to construction account? A. Yes, sir.
- Q. In the beginning of 1895 you find that that motor is no longer of utility? A. Yes.
- Q. You purchased in place of it another motor for \$800 better than that ever was? A. Yes, sir.
 - Q. For that same car? A. Yes.
- Q. And of course that is charged to construction account or equipment account? A. We charged that to operating expense, the difference.
 - Q. What? A. We charged that to operating expense.
- Q. But you have lost your first motor because it has become practically worthless? A. Yes.
- Q. Now, you bought your new motor for \$800; do you charge that to construction or operation? `A. To repair or operation account; where we change track and increase the weight of rail, or where we change cars or increase the size of cars, we charge part of that to construction account.
- Q. When you found your road operated by horse power, you found a road entirely inadequate for electrical cars? A. Yes.
 - Q. It stood then charged to construction account? A. Yes.

- Q. You took it up entirely and reconstructed the road? A. Yes.
- Q. And you charged the cost of that to construction account? A. Yes.
- Q. Now, where you are ordered to take up and relay the pavement, how is that charged, to operating expenses? A. If the street is all to be reconstructed, and we have to change the track, we charge that to construction account.
 - Q. Otherwise to repair account? A. Yes.
- Q. Now, can you state the amount of money that was paid into the treasury of the company on issuing its capital stock? A. I can not.
- Mr. Milburn.— That is one of the matters which we can furnish you; we can have it compiled from our books; it is not really in Mr. Littell's department.

By Mr. Nixon:

- Q. You do not have anything to do with the financiering of this road, do you? A. No, sir.
- Q. You simply look after the physical operation of the road? A. Yes.

By Mr. Wade:

- Q. What is your maximum speed and minimum speed at which you run your cars; that is authorized by the city? A. We are not restricted on some of our lines; on some we are restricted to eight miles in a certain district, and 12 miles in certain districts, but in those districts that we are restricted we do not make that time; where we are limited to eight miles, we average about six and where we are limited to 12 miles, I do not think we run beyond eight, or possibly nine, at times; we operate at a rate of speed from four to possibly 14 in the suburbs or outlying districts, and in the center of the city here we run at a speed not to exceed four miles.
- Q. You have but one power station? A. That is all; that power station we commenced in 1891, with three 250-horse power

engines, or, in other words, 750 horse power; we now have 7,250 horse power, but capable of running up for short intervals to 9,500 horse power.

Q. And extending your lines will necessitate further extension of your power plant? A. Further additions, yes, sir; and increased power.

By Mr. Nixon:

- Q. Do you know what it cost you per capita to carry your passengers last year? A. No, sir; I do not.
- Q. You could ascertain that from your books, could you not?

 A. I think it could be done.
- Q. I notice a statement in the paper, I think Mr. Box made the statement, that it was 3.41? A. Yes, sir; I think that included the deduction of $2\frac{1}{2}$ per cent. paid to the city.
- Q. That is one of the questions, Mr. Milburn, we would like to have you get the actual cost; do you know what it cost you per mile to run your cars last year; by that I mean your fiscal year ending June 30th? A. I can not tell you offhand, but we can give you the figures exact.
- Q. Can you tell us what it cost you per mile to carry passengers? A. No, sir.
- Q. Can that be figured, in your judgment? A. I think we can give you those figures also, but I can not tell you offhand.
- Q. That question has been asked, I think, of every road we investigated; some of them claimed they were unable to answer it; others claimed that it could be answered; the cost per mile to carry these passengers; it is hard to determine; you can not figure when a passenger gets on your car how far he rides; of course, you must estimate the number of passengers. A. Count them as one?
 - Q. Yes. A. I think that can be estimated.
- Q. I have heard it stated by street railway men when you carry a passenger more than five miles you carry at a loss.
- Mr. Milburn.—Here is a car starts off with a seating capacity of 25 on its route; it registers at the end 50; people have got on

and off; some rode four or five blocks, and some have ridden some distance.

- Q. That is rather a nice question to figure, I imagine; they make the statement they carry at a loss beyond five miles; I want to know how they reach that conclusion; it is as easy to answer the question as to say you carry at a loss? A. We have never figured it that way, but I can arrive at it.
- Q. That statement has been made perhaps one hundred times this summer.
- Mr. Wade.— Is it not this way, they figure the actual number of miles they have run the car; then they figure the number of people they have carried; then they can figure out if they all traveled five miles they would have required so much capacity? A. I do not know; I have heard it said they could not tell the cost per mile; I do not understand how they can figure how they can not afford to carry a passenger five miles? A. I think we can figure what it costs us per passenger.
- Q. You can figure that easily enough; that is, whether he rides a block or mile. A. We can not tell what it costs to carry a passenger a mile; no, we can not figure it out.
- Q. I did not think you could; and I also thought they could not tell whether they carry a passenger beyond five miles. A. I do not believe they can carry a passenger beyond five miles.
- Q. Yes, but you can not demonstrate; if you can not figure on a mile we have the right to claim that you do not know except in a general way; you can make this deduction; you can figure what it cost to run your entire system per year, and you know the number of miles, if you have 30 or 40 passengers to the car, you can carry so many passengers; you can not carry them your entire circuit; for if the passenger did it would cost so much money. A. A profitable road is a road that runs through a thickly populated district, for instance, the Broadway, Third Avenue or Sixth Avenue in New York city; those are the lines that are profitable; but long hauls are expensive matters.
- Q. Of course, it stands to reason the long haul is more expensive than the short one? A. Yes.

- Q. You were speaking in reference to your employes and you said you paid them 15, 16 and $18\frac{1}{2}$ cents; when a man goes into your employ, how many hours work a day does he get to begin with? A. In the start he gets from six to nine hours.
- Q. Does he average that for a week? A. Not for the first two or three weeks, he will not, because we require him to go through our shops to learn.
- Q. The first week you do not pay him anything? A. No, not while he is learning.
- Q. How long does that take him? A. Some men learn in a week, others in ten days, and occasionally a man will never learn.
 - Q. A man will learn in ten days? A. Yes.
- Q. What is the average of wages of your motormen, taking the entire number of your motormen, per day? A. That is guesswork.
- Q. You could figure that, could you not? A. But a very large percentage of them get 18 cents an hour.
- Q. Then you are about the only road in the State that does? A. I should think it would average in round figures 17 cents.
- Q. Our experience has been this, we will have someone on the stand and they will tell us what they pay their men, and we talk with the men and they say they do not get employment more than half the time; Mr. Vreeland swore he paid them \$2.40 and a man came and told me they did not get work more than half the time. A. The new men do not get full time.
- Q. Do you know what the average wages of your conductors and motormen are a week? A. No, sir; I do not.
 - Q. Could you give that to us, Mr. Milburn?
 - Mr. Wade.—I am writing these down. I will give them.
- Q. What is the headway of your cars on the Main street system? A. It varies according to the necessity of the travel; in the morning we have a minute and a half line, and then we reduce it down to a three-minute-line, and then back again in the evening at a minute and a half interval; that is known as the Main street route; but there are other cars intervening for a long distance; we have four lines that take off on Niagara street, and they are

not counted in the minute and a half, and then another goes into Clinton street, the Broadway line, and another line at Virginia and Allen, two more; now, beyond that point we have still the minute and a half line.

- Q. Have you sufficient power to increase that headway if there was a demand for it? A. Yes, sir.
- Q. Then your traffic arrangement, the traffic of your road, is based entirely on times of congested traffic? A. Yes, sir.
- Q. And you endeavor to meet the demands of the public at those times in the day? A. Yes, sir.
- Q. Your road pays a percentage of two and one-half per cent. of the gross receipts until they reach \$2,000,000, to the city? A. Yes, sir.
 - Q. And after that time 3 per cent.? A. Yes, sir.
- Q. You were compelled in your new construction, to pave between your tracks and two feet each side? A. Yes, sir.
- Q. And on the road you are already operating you are compelled to keep in repair the pavement within that same limit? A. For a portion of it, and a portion of it also two feet outside.
- Q. A portion of it just between the rails, and a portion two feet outside? A. Yes, sir.
- Q. Supposing that you were relieved by the Legislature from providing or caring for the pavement or the construction of new pavement, and you were relieved of the amount of money you are paying to the city, don't you think you could give a reduced rate upon your road? A. If we did it would be a small reduction only.
- Q. You pay into the treasury \$40,000 or \$45,000 a year? A. Yes, sir.
- Q. And you must know what it costs you to care for this pavement; that is charged in a separate item in your operating expenses. A. Yes.
- Q. You could make some reduction? A. Yes; if we had relief from the percentage and repairs of the street we could make some reduction.
- Q. Don't you think it better to give the community a reduction of the fare than a fixed amount paid into the city treasury? A. I think it would be more just.

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- Q. Don't you think you could operate the road between 6 and 7.30 in the morning and 5 and 7 at night at a rate by which you could give a transfer ticket for five cents, or one single ticket on one line for three cents, with those restrictions removed? A. No; I do not think so; because we have so many persons who take transfers.
- Q. I say, five cents where you give a transfer, or three where you do not give a transfer? A. I think not, sir.
- Q. Do you know what the cost on the books of your company is for this entire road? A. I do not.
- Q. You know nothing of the capital stock? A. I know the amount of capital stock issued, or about.
- Q. I suppose it would be about like asking about an income, if I asked you what the entire cost of this plant was? A. I could not tell you.
- Q. Don't you think that if this road was asked to pay a dividend upon the amount of money actually invested in capital stock, and to pay a fixed dividend upon the bonds sold at par, that you would be able to operate it for the public at a low rate of fare, eliminating the water in your stock and the water in your bonds at the time of construction? A. I could not answer that question intelligently; I am sure the bonds never would have been floated if some bonds —
- Q. No, undoubtedly they would not; it is like a wild cat stock on the stock exchange; no one knows anything about it except the promoters, and you can not get a man to take it unless you show three or four chances for one; when they come to legislation affecting them they say, we have not paid a dividend in twenty years; there is no reason why it should; the stock is nothing but water? A. The combined bonded indebtedness of the Buffalo system is about \$8,016,000, while the stock outstanding is about \$5,329,500, I think.
- Q. That is in addition to this indebtedness; that is, your bonded indebtedness and stock together represents between \$13,000,000 and \$14,000,000? A. Yes, sir.
 - Q. About \$100,000 a mile for your road; now, you have no idea

that this road cost \$100,000 a mile, or one-half of it? A. It cost more than half of it.

- Q. Not much more, did it? A. I could not tell you; you must remember this road must have a good deal of real estate; power-house; they have a power-house that cost a good deal of money; cars, snow plows —
- Q. Of course, you must take into consideration it cost you more to change your road from horse power and electricity and everything of that kind; those things should be taken into consideration, but the question is whether or no a railroad should be allowed to bond itself indefinitely for whatever it wishes to, get the amount of capital stock and dispose of that with the bonds, and receive nothing for it, and then come and ask the public to pay a dividend on that stock; do you think that is a fair proposition, as a railroad man, to place on the traveling public? A. I could not answer that.
- Q. I did not think you would? A. It would be a great hard-ship on the purchasers of the stock.
- Q. That is true; that is the plea corporations always make; but if the Legislature takes this up and compels corporations to pay in dollar for dollar, then you would know the actual amount of money invested, and you could make your investment accordingly? A. Could not that all be reached by referring it to a committee of good men to look after those matters.
- Q. The question of bonded indebtedness used to be referred to the Railroad Commissioners, but that was repealed in 1882 or 1883.

By Chairman Nixon:

In the State of Massachusetts they are compelled to pay for the capital stock dollar for dollar.

By Mr. Milburn:

That is the same in paying that; we have to pay the cash; we have to pay the cash, cash and property; we know what that means; you have got to build this road; a certain road, and you make a contract with a man to build it and you make the best contract you can, and you pay him in stock and pay him in bonds.

Mr. Nixon.— You know this, if you know anything about railroad constructed at all, that almost every one of these roads is built and equipped out of the money received by their bonds, and the stock represents nothing.

Mr. Milburn.— I think that is a radical statement; I do say that you take any enterprise in the nature of railroads, or furnish these various needs of the human race, and any body of men in taking them up are governed by the conditions; people will not come in and subscribe and be glad to do it, and look forward to 6 per cent. with a pretty sure probability of the stock being good for nothing; but they can find some one capitalist who will build this road and that will do it for so much stock and so much bonds; things are governed by the needs at the time; you must do that or have no railroad.

Mr. Nixon.— This might be a question that could be raised at the time of the construction of a road, and might be postponed; I understand there are some gentlemen in connection with your road that think these extensions outside are not necessary; the Buffalo Traction Company are building way outside; there is no demand for a road out there, I have heard some gentlemen of your road say.

Mr. Milburn.— If we would put \$10,000 into a concern and take nothing out of it for five years, and we do not want to draw any dividends, and we draw a stock dividend of 40 per cent. out of it that has represented nothing in all those years, now the public will turn around and say that 40 per cent. is water; I say that 40 per cent. is value; and seven-tenths of this talk about water has that substratum of value to it.

Mr. Wade.— You take this road in New York, this Dry Dock, West Broadway and Battery Road; it is capitalized at \$1,200,000; it is a horse-car road, and it has just 5 miles of single track, and stables and barns and cars, and it is bonded for \$260,000. Some years ago they had too much money, and they issued certificates of indebtedness of \$1,200,000, paying 7 per cent. interest, and divided that among the stockholders proportionately. Since then they have paid 8 per cent. on the stock, 6 per cent. on the bonds

and 7 per cent. on the certificates of indebtedness, and their general superintendent testified that \$250,000 would rebuild every tangible asset the company had. The bonds are worth 140 and the stock 192.

Mr. Milburn.— What I wish to say is this. No specific instance will cover the entire ground. We will have to take up every road and look into its history and expenses, and look into the expenditure of money. That has to be capitalized and each tub has to stand on its own bottom.

Mr. Nixon.—That is true.

Mr. Milburn.— And you must take into consideration that the people who have money and want safe investments will not take it.

Mr. Nixon.— You do not consider Clark & Co. or MaGee or Johnson, or others in that line; you do not consider them investors.

Mr. Milburn.— Not at all. They make big bets. They deal in millions. They would scare me, and they make bets that would keep me awake nights. I will tell you what I will do. You take a good, original fortune with any of those men, and one man put it out at 6 per cent., and he will beat the other man with all his million dollar operations.

Mr. Wade.— I don't know. You wind any of these men up any particular day in the year, and who knows who he is or what he is. Here is the point here. Should the law permit a railroad company to issue any amount of stock that it sees fit, and put it out at anything it sees fit.

Mr. Milburn.— I say that your proposition is an entirely proper one; that there should be this State Board of the best men we can get—experienced men, properly paid—and with power to have every support, and it would be much better for the railroad. There are complaints, and how much better it would be to refer these complaints to the State Board, and have the State Board report there is admirable service.

Mr. Wade.— You would want about 75 State Boards.

Mr. Milburn.— That would disappear. They have an engineer. They could have a force of a few men that could go, and when

the merits of the thing were looked into that would be the end of many of them.

Mr. Wade.— You concur in the idea that there should be some legislative enactment to place some few restrictions on this?

Mr. Milburn.— Until a few years ago any 15 men in the State of New York could sit down and draw up incorporation papers, and file them in the Secretary of State's office, and organize a railroad from New York city to Buffalo, and when they had done that they had a franchise to do it.

Mr. Wade.— The difference is we require 30 to-day.

Mr. Milburn.— It is not a doubt but what the whole stock and bonds of that road should be submitted to the State Board and approved.

Mr. Nixon.— You have to show now where you have to raise the money with a new road. You can not get a franchise now without a dollar in sight.

Mr. Milburn.— Not at all. But the whole thing could be made a scheme of stocks and bonds, and that could be approved so that the final certificate of the Board of Railroad Commissioners would fix the amount of stock and the amount of bonds, and that would be the amount of stock and the amount of bonds of that company, and then when they want to increase, at any time, apply to the board and have the increase fixed.

Mr. Nixon.— Don't you think it would be fair—you say to compel them to pay up the stock, you say that is unfair—don't you think they should pay 50 or 25 per cent. and show their faith by putting up a dollar.

Mr. Milburn.— If you have the original amount sanctioned, I do not see where it is anything to the public whether we put up 15 cents on a dollar cash for our railroads, or whether we get iron or ties or cars in return for it.

Mr. Wade.— That is an equivalent.

Mr. Nixon.— The trouble is, they do not buy anything.

Mr. Milburn.— Then you are passing upon their contract that is being made for construction. We know how contracts are made for construction. Here are people who need 10 miles of road.

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Now, they have some stock and they have some bonds. They have not got the capital to put up to build that road. They go to some concern who will build a road, and they say, here, we want a road built and equipped. How much will you charge us to build the road and equip it? They say we will charge you so much money. Then the reply is made, we will give you so much money and so much bonds and so much stock.

Mr. Wade.— They generally form a construction company.

Mr. Milburn:

- Q. Haven't you always on your list a large number of applicants for employment? A. Oh, yes; constantly.
- Q. Men who are willing and desirous to enter into the employment of the company on the terms which you have? A. Oh, yes.
- Q. Now, is the matter of electrical propulsion during the last four or five years, and is it now, to a considerable extent, in an experimental state? A. Yes, sir.
 - Q. Requiring constant substitution? A. Yes, sir.
- Q. And when the old appliance is being put out of use it is still perfectly good for the purpose for which it was bought? A. Yes, sir.
- Q. But an improvement has come into vogue that you wish in your service? A. Yes.
- Q. Just one question; in the management of your system of railroads that you have there, is it a matter of constant attention and study on your part to ascertain as to the developments and improvements and appliances in connection with electrical improvements? A. It is; it requires eternal vigilance.
- Q. Do you hesitate, if a new appliance comes into effect, to get it, although that means the discarding a lot of apparatus in perfectly good order? A. We get it if we can.

By Mr. Wade:

Q. You take those old motors, we have been talking of, and you can neither discard them in good order or keep them in good order? A. No, sir.

Q. The force of men to keep them in good order to-day is nothing compared with the old motors you purchased in 1890? A. No, sir; we have now 260 car equipments we are negotiating to change, and some of them were bought within eighteen months.

Henry M. Watson, called and sworn, testified:

By Mr. Wade:

- Q. You reside in Buffalo? A. Yes.
- Q. And are president of the Buffalo Railway Company? A. Yes, sir.
- Q. And have been since what time? A. Since its organization.
- Q. Were you interested in the old lines prior to that? A. To a small amount.
- Q. Prior to the time of the consolidation? A. To a small amount.
- Q. And are you familiar with the system to a certain extent? A. Yes, sir.
- Q. At the time of the purchase of these smaller roads, and the organization of your company, some outside capitalist took an interest in that enterprise? A. Yes.
 - Q. And some of them continue to? A. Yes, sir.

Mr. Milburn:

Q. The original East Side? A. The Buffalo and East Side together, and the Buffalo, too.

By Mr. Wade:

- Q. That occurred when? A. In 1890, I think it was.
- Q. I am talking about the consolidation; and that was done with a view of electrifying the entire system? A. Yes, sir.
- Q. At that time the subject of propelling street cars by electricity was in its infancy? A. Yes, sir; we had a small plant; about 2 miles.

- Q. And without going over this whole thing again, that required the reconstruction of this entire road? A. Yes, sir.
- Q. Now, Mr. Watson, can you tell us here what amount of the capital stock was paid in on the reconstruction? A. I can not without referring to the books.
 - Q. Or the property? A. I can not without the books.
 - Q. By reference, can you do that? A. Yes.
- Mr. Milburn.— That we will be very glad to compile and furnish.
 - Mr. Wade.— I will draw a question on that.
 - Mr. Milburn.— All right.

By Mr. Wade:

- Q. Now, Mr. Watson, you have been connected with the rail-road business to a greater or lesser extent for a great many years?

 A. Since 1864.
- Q. And as president of this road you have something to do with its financial operations? A. Yes, sir.
- Q. And are familiar with the scheme of financing an enterprise of this character? A. Yes.
- Q. In the purchase of the old lines you exchanged stock for the stock that you bought? A. Yes, sir; it is so stated in the engineer's report.
- Q. And it appears by the evidence of Baecher, here, the amount? A. Mr. Baecher.
- Q. He gave the amount? A. Yes; he has all those figures; I have not.
- Q. In your answer to that question you can give us the manner in which you arrived at the value of the stock which was taken up at that time and paid for by the stock of the new company? A. Put that down, Mr. Milburn.
- Q. How did you reconstruct this road; yourself, or through the agency of a construction company? A. We had as contractors
 - Q. And you let the contract outright? A. Yes, sir.
- Q. Who were those contractors? A. Mr. Verner was one, and Mr. Field was the other; that was the Field Engineering Company.

- Q. Were they connected with the road? A. Mr. Shield was not.
- Q. Mr. Verner was? A. I do not know but he was out; I think Mr. Verner was out, but I am not sure.
- Q. In the reconstruction of that road did you re-equip it? A. Yes, sir; we added to it; what do you mean?
- Q. I mean this; did you have to supply it with new cars? A. Oh, yes.
 - Q. The old ones were equipped for horse cars? A. Oh, yes; we are doing that now; we are enlarging all our old horse cars; putting on ten feet and making the car longer.
- Q. And you are operating about how many cars now? A. About 300.
- Q. What is the capital stock of the company? A. Six million dollars.
- Q. It has \$500,000 unissued? A. Yes, a little over; I think about 1,700 shares.
- Q. Have you paid any dividends since the road was electrified? A. Two; that is all it has ever paid since way back in the sixties.
- Q. Did the road at an early period show a net earning? A. How long ago.
 - Q. Take it for 20 years back? A. When I first came in 1868.
- Q. From that until the time you consolidated? A. Very small; we kept putting money into it; it was bankrupt practically.
- Q. Of course, if you put in an extension. A. That was down on the east side; the Buffalo could not extend; it was confined to Main and Niagara streets.
- Q. Did those roads earn a dividend? A. No, sir; the whole road was laid in cast iron and it was all taken out and reironed, and it took all the money to reiron it.
- Q. The net earnings, then, of the road were put back into it? A. Yes, sir.
 - Q. By the reconstruction? A. Yes, sir.
- Q. Then when you came to electrify it you reconstructed it again? A. Yes.

- Q. Was any considerable sum of money turned over from the old company to the new company when you consolidated? A. No, sir.
- Q. So that the money means for doing this work and purchasing the material had to be obtained in some manner? A. Yes, sir.
- Q. Have you given the subject of how railway companies should acquire the right to use the street from the cities, such consideration? A. I have not.
- Q. In making the extensions which you contemplate have you already acquired the right to do so? A. From the city?
 - Q. Yes. A. Yes, sir.
 - Mr. Milburn.—Which extension?
- A. In the extension we have to go to the council and property owners.
 - Q. In all you have made? A. Yes.

By Mr. Wade:

- Q. I understand you have certain extensions under contemplation? A. Oh; I understood; I thought you meant where we have.
 - Q. No; that is a different thing. A. No.
- Q. You find that penetrating a new section with an electric road it acts as a sort of a stimulant on that locality in building it up? A. After some time; I recollect when they built the Genesee street road it was built as far as Jefferson street and we built it out one-half mile further and it did not advance the price of land a dollar; that was with horses and it was two or three years before the land advanced at all.
- Q. That was with horse cars? A. Yes, sir; that was a very singular fact.
- Q. Those are not calculated to do much; your city here, you have got most of the earth in this region of country staked off into lots a little in advance of the ordinary and natural growth of the city? A. Yes, I should think we had.

Mr. Milburn.— Eleven square miles in one ward.

- Q. Now, Mr. Watson, what is your idea, if you have a definite idea upon the subject, of the feasibility of putting street railways under municipal control? A. I think it would be very bad; I think they operate cheaper as they are; have you got great results from the Brooklyn bridge?
- Q. No; and that is in some senses not quite a fair test; traffic centers there and it can not center elsewhere. A. That is right.
- Q. And it has about so much capacity and that can not be increased; if the earnings of the road are more than sufficient to keep up the property and pay fair dividends do you think that should be taken care of by a reduction of fare or by turning the surplus into the city? A. It seems to me it should be done by a reduction of fare.
- Q. You know many advocate a graduated scale of percentage to be paid to the city? A. I know; but supposing a poor man that has no taxes to pay, and another man has large taxes to pay—who gets the benefit of this percentage to the city; perhaps the tax-payer does not ride on the cars at all.
- Q. Now, the laboring man, the clerk in your stores, and the girls that go to these various offices to work, they patronize your road morning and evening? A. And the percentage to the city goes to pay the taxes of the large property owners.
- Q. Of the New York Central Railroad Company and other corporations? A. Exactly.
- Q. Now, don't you think it would be beneficial to this city if your road could be relieved of that and that \$40,000 saved to that class of people? A. I think it would; we paid about \$43,000 or \$46,000 last year; that is a one-tenth of one cent per passenger carried.
 - Q. One cent on your passengers is \$300,000?
- Mr. Milburn.—Forty-five thousand dollars is 45,000,000 people. Drop of 12,000,000: It is about two-tenths of a cent.
- Q. If you were relieved of that, Mr. Watson, supposing you would then put on sale a book of tickets, 60 for \$2, upon which no transfer could be issued. A. I should want to get out of the railroad business; there would be such a jam on those cars.

- Q. Good between 5.30 and 7.30 in the morning and 5 and 7.30 in the evening? A. I do not believe it would work well; all the railroads are doing all they can in all hours.
- Q. You want to do all you can in all hours? A. Why not make it other hours?
- Q. Because that class of people do not travel in other hours. A. That is the trouble.
- Q. We have exactly that system in Sayre; of course, that is a little road, but it has demonstrated to our entire satisfaction that it was not only beneficial to the operatives in the Lehigh shops, but to the road also.
- Q. Now, figuring on that, and no transfer could be allowed, from that book, then the benefit which you get by being relieved from the payment of this tax— A. That is not much; only one-tenth of a cent.
- Q. That is one-tenth of a cent on all your passengers? A. I know it.
- Q. You see those books would not be good at other hours? A. I do not know; that is a problem to work out; I have a word to say about putting out tickets; the loss on tickets is enormous; now, we ran our issue here nine years, and then changed the color of our tickets and there was only \$400 worth of tickets out; they were out two years ago and they are still coming in; now we are carrying 45,000,000 of people so that you see it does not amount to anything.
- Q. Well, with your operating expenses costing you 60 per cent. of your gross receipts, and that is probably as small as the average in the State— A. You must take the whole year together; of course, some months you can operate less, but 60 per cent. is a fair price to put on.
- Q. That is what I thought; in making that statement I mean to take the year through? A. That is about the average.
- Q. I say that is a smaller per cent. than the roads of the State will average. A. I think our road has been pretty economical; a bad winter makes a big difference; I have seen it here with horses when it cost us 18 cents a passenger per month to carry them for

two months; that was a very exceptional winter though; we had to shovel snow all the while.

- Q. But the problem is just how to regulate; you know there is a human cry all over the State about how to regulate franchises; that the people of the municipalities are giving away valuable franchises; on the statement of your old road they did not give away much, an investment of thirty years did not return a dollar? A. No, sir.
- Q. There seems to be some demand for a change in the method of disposing of these franchises; now, the question is, what is the best thing to do; shall we empower the municipality to contract with you that you will reduce the fare, or reduce the fare certain hours of the day, or pay to the city a certain sum or percentage, or shall you divide dividends with the city; all these propositions are brought up? A. I know they are.
- Q. And we feel that the men who are in the railroad business, and of course have given it some thought, would have opinions that would be valuable? A. It is a pretty difficult problem to solve.
- Mr. Milburn.— Don't you think that problem would be simplified if a city like this was hardened down into its normal growth and development; it has had exceptional growth; there is going to be a time when this city will be pretty well supplied with facilities and about a normal position of traffic; it seems to me when those things are arrived at the rate of fare becomes a comparatively simple matter.
- Q. I think under all conditions you have a remarkably good road in Buffalo? A. You can not tell how soon this electrical equipment is going to play out; I had talks with a couple of gentlemen from Toronto last winter in the South, that were talking about it; the question is, how long is this equipment going to last.
- Q. Yes, you are very likely to come into contact with radical changes in the generating of electricity? A. Yes; to-day I was talking with a gentleman from Chicago who wanted to put in this system of conduits; it is the Buda Pesth system.

By Mr. Nixon:

Q. What is the name of that? A. I do not know the name; in this you relay the track; I suppose it is a hollow and different rail that he carries the current in.

By Mr. Wade:

- Q. You know they are experimenting with a short line in New York and are trying to go through the winter with it? A. He says the winter will not disturb this rail at all; but I do not know; I would like to see.
- Q. It is very true in your city, if I understand the character of the patronage of your road, that that \$46,000 you pay into the treasury is quite largely paid by the laboring classes? A. I should hink that it was, a good deal of it; you can not tell how much, exactly.
- Q. No; but the charts put in evidence would sustain the statements made by your people that the traffic in the early morning and again in the evening is very heavy, compared with other hours? A. One road is very peculiar all the heavy travel is in the morning; the Broadway line, I think it is.
- Mr. Milburn.— Recently, in a hearing before the State Railroad Board, did you ascertain the amount of travel on the five miles of Broadway in New York? A. I wrote Mr. Vreeland, the president of the Metropolitan Traction, asking these questions: "Will you please give me the length of your road, the headway of your cars, and the number of people that you carried last year." He wrote back to me; he said: "The length of our road is five miles, extending from the Battery to Fifty-ninth street, double track; that is, ten miles of single track, on which the headway of our cars is 30 seconds, and we carried 41,000,000 of passengers last year." Now, in Buffalo, we have 140 miles of single track, on which we carried 46,000,000 last year; they carried 41,000,000 on ten miles, where we carried 46,000,000 on 140 miles; now, they only have five miles to maintain and keep snow off, and keep in repair.
- Q. Did not they figure Columbus avenue and Lexington avenue?
 A. No; that is all I asked; I have the State report, 1894; he reports

the Metropolitan Traction, total number of passengers carried in cars last year, 107,000,000, transfers, 41,000,000; now, he gave me 41,000,000 for that one line alone.

Q. They could tell what that line carried because they are Broadway cars; but the Lexington avenue and Calumbus avenue cars run over that road.

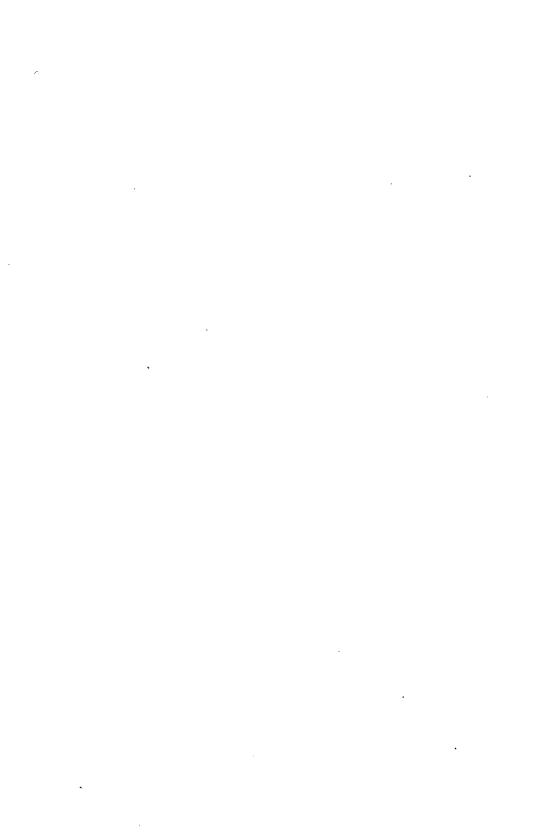
Mr. Nixon.— We submit these questions with this understanding, that you submit the replies to us the first of January, and if those replies suggest any inquiries, that you will bring your witnesses to any place we name, as suggested by Mr. Box. A. That is all right, sir.

Mr. Milburn.— That is very satisfactory and we will comply with it.

The committee took a recess subject to the call of the chair.



EXHIBITS.



Union Railway Company of New York City.

COMPILATION OF CHARTERS AND EXTENSIONS.

HARLEM BRIDGE, MORRISANIA AND FORDHAM RAIL-WAY COMPANY.

Articles of Association.

Made and signed pursuant to chapter 140 of the Laws of 1850, and also pursuant to the Act passed May 2, 1863, and known as chapter 361, entitled, "An act to authorize the construction of a railway and tracks in the towns of West Farms and Morrisania."

- 1. The subscribers do hereby form a company to construct, maintain and operate a railroad for public use in the conveyance of persons and property.
- 2. The name of the company shall be the Harlem River Bridge, Morrisania and Fordham Railway Company.
- 3. The company shall continue for one thousand years from the filing of these papers in the office of the Secretary of State.
- 4. The places from and to which the road is to be constructed, maintained and operated are as follows: Commencing at or near the termination of the Harlem or Cole's Bridge on the Westchester side and running along the Boston Post Road to a point where the said road intersects with Fordham avenue, and thence along said Fordham avenue by a single or double track with necessary turnouts, to the Kingsbridge road, thence along the same, to the Harlem river road, at or near its depot at Fordham.
- 5. The length of the road from Harlem bridgé to Fordham about four and a half miles.
 - 6. The road is entirely in the county of Westchester.

- 7. The capital shall be (\$100,000) one hundred thousand dollars.
- 8. The number of shares shall be two thousand shares of fifty dollars each.
- 9. The thirteen directors who shall manage the affairs of the company for the first year, and until others shall be chosen in their places, are as follows:

John B. Haskin.

Ralph L. Anderson.

Frederick Groat.

Charles Bathgate.

Abraham B. Tappen.

John Bussing.

C. Talman.

Thomas Stewart.

John C. Kayser.

Edward Baack.

William H. Van Cott.

William Cauldwell.

Perry Pierre.

Horace P. Whitney.

- 10. The railway intended to be constructed, maintained and operated by the company hereby formed, will be governed and regulated by the acts of the Legislature, above referred to, passed May 2, 1863, and also the acts above referred to passed April 2, 1850, and any amendment thereof, so far as applicable.
- 11. Each subscriber to these articles subscribed here to his name, his place of residence, and the number of shares of stock he agrees to take in the company hereby formed.
- 12. The company hereby formed does not avail itself of the privileges of the ninth section of the act of May 2, 1863; but such privileges and franchises conferred by said ninth section are expressly reserved to the said grantees in said act, and their assigns, as the basis of a separate co-operative organization.

Name and residence.	No. of shares.
John B. Haskin, Fordham	138
Thomas Stewart, 18 State street, N. Y	140
Ralph L. Anderson, Fordham	138
Henry R. Wilkinson, New York city	138
Charles Bathgate, West Farms	40
F. Groat, Fordham	140
Richard Sill, Morrisania	140
Edward Baack, Fordham	140
William Cauldwell, Morrisania	100
Abraham B. Tappen, Fordham	140
John C. Kayser, Fordham	10
Horace P. Whitney, Brooklyn, N. Y	40
P. C. Talman, West Farms	2
William H. Van Cott, New York city	2
John Bussing, Fordham	22

CITY AND COUNTY OF NEW YORK, 88 .:

On the 12th day of May, 1863, before me personally, came John B. Haskin, Thomas Stewart, Ralph L. Anderson, Henry R. Wilkinson, Charles Bathgate, Frederick Groat, Richard Sill, Edward Baack, William Cauldwell, Abraham B. Tappen, John C. Kayser, Horace B. Whitney, Pierre C. Talman, and John Bussing to me known to be the same persons described in and who executed the foregoing articles of association, and they severally acknowledged to me that they executed the same.

CHARLES H. HINMAN,

Notary Public in and for the County of New York.

CITY AND COUNTY OF NEW YORK 88:

John B. Haskin, William Caldwell and Abraham B. Tappen, being severally duly sworn, each for himself, says:

First.— That he is one of the directors named in the articles of association of the Harlem Bridge, Morrisania and Fordham Railway Company.

[Assembly, No. 98.]

Second.—That one thousand dollars of stock for every mile of railway proposed to be made is subscribed in good faith, and that ten per cent. thereon has been paid in in cash and in good faith, as required by law.

JOHN B. HASKIN.
WILLIAM CAULDWELL.
A. B. TAPPEN.

Sworn before me May 13, 1863. CHARLES H. HINMAN, Notary Public.

AMENDMENT TO ARTICLE 12 OF ARTICLES OF ASSOCIATION.

OFFICE OF THE HARLEM RIVER BRIDGE, MORRISANIA AND FORDHAM
RAILWAY COMPANY.

Morrisania, June 27, 1863.

At a meeting of the stockholders of said company, held pursuant to notice and call for such purpose, the following resolutions were unanimously adopted:

Resolved, That article 12 of the articles of organization or incorporation of the Harlem Bridge, Morrisania and Fordham Railway Company, acknowledged before Charles H. Hinman, Notary Public, on the 12th day of May, 1863, and filed and recorded in the office of Secretary of State at Albany, on the 16th day of May, 1863, so far as the same expresses an intention and the purpose of the grantees named in the act of May 2, 1863, mentioned in the same articles of association, not to avail themselves of the privileges of the Harlem River Bridge, Morrisania and Fordham Railway Company (amendment to articles of association), ninth section of said act, be and the said article is hereby rescinded, annulled and repealed.

Ninth section of said act, be and the said article is hereby recinded, annulled and repealed.

Resolved, That as grantees and incorporators named in the said act and the same articles of association, and assigns of certain of the grantees, and as representatives and holders of all the shares of the capital stock of said company and of all the franchises and privileges of said act, including the ninth section thereof in relation to the extension of the railway and tracks of the said company, and the route thereof to West Farms and Westchester and to Mount Vernon, in the towns of West and East Chester, and the operation of the road by dummy engines be, and the same, are hereby accepted and availed of by us.

And these resolutions are adopted and incorporated with the said articles of association as a part thereof and as an amendment to and forming an article of the said articles of association instead of the twelfth section thereof.

And all the privileges and franchises of said ninth section are hereby vested in the said incorporation or company.

In witness whereof, the undersigned, being the persons representing all the shares, interests and franchises aforesaid, have hereunto subscribed their names and seals the day first written. Grantee and assignee of Thomas Stewart, also grantee,

and representing 401 shares	[L. S.]
John B. Haskin for self and assignee of Thomas	
Stewart.	[L. S.]
William A. Darling, 140 shares.	[L. S.]
H. R. Remsen, Jos. McD., attorney, 140 shares.	[L. S.]
Abraham B. Tappen, 79 shares.	[L. S.]
Ed. Baack, 140 shares.	[L. S.]
Ralph L. Anderson, 100 shares.	[L. S.]
Caroline S. Talman, per P. C. Talman, attorney, as-	
signee, 226 shares.	[L. S.]
John Bussing, 20 shares.	[L. S.]
Horace P. Whitney, 170 shares.	[L. S.]
Pierre C. Talman, 2 shares.	[L. S.]
William Cauldwell, 140 shares.	[L. S.]
William Remsen, 140 shares.	[L. S.]
S. Groat, 140 shares.	[L. S.]
H. Hart, 140 shares.	[L. S.]

WESTCHESTER COUNTY, STATE OF NEW YORK, 88.:

On this 27th day of June, 1863, before me personally appeared John B. Haskin, William A. Darling, Henry R. Remsen, by William A. Darling, his attorney in fact; Abraham B. Tappen, Edward Baack, Ralph L. Anderson, John Bussing, Horace P. Whitney, Pierre C. Talman, William Cauldwell, William Remsen, Frederick Groat, Henry Hart and Caroline S. Talman, Pierre C. Talman, her attorney, in fact, known to me to be the persons who executed the foregoing instrument, and acknowledged to me that they executed the same for the use and purposes therein mentioned.

RICHARD SILL,

Notary Public in and for the County of Westchester.

CITY AND COUNTY OF NEW YORK, 88 .:

John B. Haskin, being duly sworn, says that he is the president of the Harlem Bridge, Morrisania and Fordham Railway Company, and is one of the directors thereof; that \$1,000 of stock for every mile of railway proposed to be made is subscribed thereto, and subscribed in good faith; and that 10 per cent. thereon has been paid in cash, and in good faith as required by law. That it is the intention of said company, in good faith, to build and construct said road according to law.

JOHN B. HASKIN,

President Harlem Bridge and Morrisania and Fordham Railway Company.

Sworn before me the 29th day of June, 1863.

CHARLES H. HINMAN,

Notary Public.

CHAPTER 631, LAWS OF 1863.

AN ACT to authorize the construction of a railway and tracks in the towns of West Farms and Morrisania.

Passed May 21, 1863.

The People of the State of New York, represented in Senate and Assembly do enact as follows:

Section 1. It shall be lawful for George W. Devoe, William Cauldwell, John B. Haskins, Edward Baack, Ralph L. Anderson, Frederick Groat, Charles Bathgate, James Edwards, C. H. Reynolds, John C. Kayser, Silas D. Gifford, Thomas Stewart, Henry R. Wilkinson, Richard Sill, and those who may now or hereafter be associated with them shall have the exclusive right to lay a double track on the center of the Boston Post road, and to use and operate the same, commencing at or near the termination of the Harlem or Cole's bridge on the Westchester side, running along said road to a point where the said road intersects with Fordham avenue, and thence along said Fordham avenue by a single or double track, with necessary turn-outs, to the Kings Bridge road; thence along the same to the Harlem railroad, at or near its depot at Fordham.

- § 2. The cars to be used on said road shall be drawn only by horses or other animals.
- § 3. The rails to be laid on said road shall be of the most approved pattern (such as are used on the Philadelphia city railroads), of the weight of not less than 30 pounds to the yard. Between the tracks and between the rails shall be macadamized and kept in good repair; and on each side of the rails, outside of the tracks, to be a distance of six feet on each side of the outside of both tracks thereof, the road shall be paved with the Belgian or other approved pavement, or shall be macadamized and kept in good repair, and the rails shall be so laid as not to obstruct carriage travel, and the said grantees shall best conform their tracks to the grades of the roads as they now are or may be changed by 'the authorities of the town.

- § 4. The said road, from its point of commencement at Harlem bridge to Eighth street, Morrisania, shall be completed in six months, and from that point to the Fordham depot in twelve months and from the passage of this act. If said corporation are delayed in commencing or completing the said road, by any cause other than their own act, the time during which such delays continue shall not be included in said period.
- § 5. No greater amount of fare shall be charged any passenger from Harlem bridge to Eighth street, West Farms, than five cents; nor a greater sum from Harlem bridge to Tremont than eight cents, nor a greater sum than ten cents for the entire distance.
- § 6. The grantees herein named, and their successors or associates, shall have power to issue bonds or obligations for the construction, equipping and running of said road, to the amount of one-half of the capital stock necessary for such purposes.
- § 7. Said grantees and their associates are hereby required, within two months after the passage of this act to organize, an act of the legislature entitled "An Act to authorize the formation of railroad companies, and to regulate the same," passed April second, eighteen hundred and fifty; and such corporation, when so formed, shall have the powers and be subject to all the provisions of the said act not inconsistent herewith, except the following sections, or any modification of them, viz.: the twentyseventh, thirty-first, thirty-fourth (as far as it relates to the transportation of property), thirty-seventh, thirty-eighth, thirty-ninth, fortieth and forty-fourth; and excepting, also, as to the number of associates and the amount of capital stock to be subscribed, as required by the first and second sections of the said act; but the said corporation shall make an annual report to the state engineer and surveyor of its business and affairs, in such manner and form as he shall require.
- § 8. The corporation formed under this act is hereby required to make a reasonable compensation to the owner or proprietor of the Union stage line, McGouth independent stage line, by reason of the purchase of the same, or damage by reason of the laying of. said track, to this line; and for such purposes the corporation or

the grantees herein, or a majority of them, shall appoint one disinterested party, the owner of the stage line shall appoint one disinterested party, and these two shall agree upon the amount to be paid the owner of the stage line. If the said parties shall fail to agree upon the price to be paid by the parties herein, then the appraisers shall choose a third party, and a decision of a majority of them shall be final and binding upon the corporation and the proprietor of the stage lines; said stages to be run by the proprietor thereof until the completion and operation of said road as far as Eighth street, in Morrisania.

§ 9. It shall be lawful, and the corporation formed under this act is authorized, to lay railway tracks at the termination of its road at Fordham, or at any other convenient point, by the most feasible route, to the village of West Farms, and from thence to the village of Westchester, and from thence to the village of Mount Vernon, in the towns of West and Eastchester; and said roads may be operated by dummy engines. Bridges crossing navigable streams, for the use of railroad, shall be constructed with sufficient and proper draws, provided the consent in writing shall first be obtained from the supervisor and commissioner of highways of the respective towns before constructing either of the roads provided for in this section.

§ 10. This act shall take effect immediately.

CHAPTER 715, LAWS OF 1865.

AN ACT to amend an act entitled "An act to authorize the construction of a railway and tracks in the towns of West Farms and Morrisania.

Passed May 12, 1865.

The People of the State of New York, represented in Senate and Assembly do enact as follows:

SECTION 1. Section two of the act entitled "An act to authorize the construction of a railway and tracks in the towns of West Farms and Morrisania," is hereby amended so as to read as follows:

- § 2. The cars to be used on said road shall be operated by . dummy engines or horse-power.
- § 2. Section nine of said act is hereby amended so as to read as follows:
- § 9. It shall be lawful, and the corporation formed under this act is authorized, to lay railroad tracks at the termination of its road at Fordham, or at any other convenient point by the most feasible highway to the village of West Farms, and from thence to the village of Westchester, and from thence to the village of Mount Vernon. Bridges crossing navigable streams for the use of said railroads shall be constructed with sufficient and proper draws, provided, the consent in writing shall first be obtained from the supervisors and commissioners of highways of the respective towns before construction of either of the roads provided for in this section.
- § 2. This act shall take effect immediately.

CHAPTER 815, LAWS OF 1856.

AN ACT to amend chapter 361 of the Laws of 1863, entitled "An act to authorize the construction of a railway and tracks in the towns of West Farms and Morrisania," passed May second, eighteen hundred and sixty-three,

Passed April 25, 1866.

The People of the State of New York, represented in Senate and Assembly, do enact as follows:

SECTION 1. Section three of an act entitled "An act to authorize the construction of a railway and tracks in the towns of West Farms and Morrisania, passed May second, eighteen hundred and sixty-three, is hereby amended by adding to the end of this section the words following: The rails to be laid on said road shall be of the most approved pattern, of the weight of not less than thirty pounds to the yard. Between the tracks and between the rails the road shall be macadamized or paved, and kept in good repair by said company; and whenever the authorities, either of the town

of Morrisania or the town of West Farms, shall decide upon paving with Belgian pavement, or other approved pavement, the road or avenue upon which the rails of said company are now laid, one-sixth of the cost of such paving shall upon the completion thereof, be paid by said railway company to the proper authority of said towns or either of said towns.

- § 2. The legislature may at any time alter, amend or repeal this act.
 - § 3. This act shall take effect immediately.

CHAPTER 892, LAWS OF 1867.

AN ACT to amend an act entitled "An act to authorize the construction of a railway and tracks in the towns of West Farms and Morrisania," passed May second, eighteen hundred and sixty-three.

Passed May 11, 1867.

The People of the State of New York, represented in Senate and Assembly, do enact as follows:

- Section 1. Section five of the act entitled "An act to authorize the construction of a railway and tracks in the towns of West Farms and Morrisania," passed May second, eighteen hundred and sixty-three, is hereby amended so as to read as follows:
- § 5. No greater amount than six cents shall be charged for the transportation of a passenger from Harlem bridge to the northerly boundary of the town of Morrisania; nor a greater amount than eight cents from Harlem bridge to Locust avenue, Tremont, nor a greater amount than ten cents from Harlem bridge to the terminus of the road at Fordham.
- § 2. Section nine of said act is hereby amended to read as follows:
- § 9. It shall be lawful, and the corporation formed under this act is hereby authorized to lay railway tracks and operate the same along One Hundred and Thirty-eighth street in the town of Morrisania, to Port Morris, and along William street, Grove street,

Butternut street, Cedar street and River avenue, in said town to Morrisania and across Cromwell's creek, to the village of Highbridgeville, the said railway tracks not to be laid upon or along any part of Central avenue in said town except across the same, and along the Boston Post road to the village of West Farms and the village of Westchester in the town of Westchester. The cars on said railroad hereby extended shall only be drawn by horses or other animals, unless otherwise assented to in writing by a majority of the owners of real estate on said extension.

§ 3. This act shall take effect immediately.

CHAPTER 658, LAWS OF 1871.

AN ACT to amend an act entitled "An act to authorize the construction of a railway and tracks in the towns of West Farms and Morrisania," passed May second, eighteen hundred and sixty-three.

The People of the State of New York, represented in Senate and Assembly, do enact as follows:

Section 1. Section nine of an act entitled "An act to authorize tion of a railway and tracks in the towns of West Farms and Morrisania," passed May second, eighteen hundred and sixty-three, as amended by chapter eight hundred and ninety-two of the laws of eighteen hundred and sixty-seven, is hereby amended by adding to the end thereof as follows: It shall also be lawful, and the corporation formed under this act is hereby authorized, to lay tracks and operate the same, either through Lincoln avenue and One Hundred and Thirty-third street, or through both of said streets and avenues, in the town of Morrisania, if necessary, to connect with the ferry of Morrisania steamboat company.

- § 2. Section three of said act is hereby amended to read as follows:
- § 3. The rails to be laid on said route shall be of the most approved pattern and of the weight of not less than thirty pounds to the lineal yard, and the said grantees or their successors shall

keep the surface of the street inside the rails, and for one foot outside thereof, in good and proper order and repair, and conform the tracks to the grades of the streets or avenues as they now are or may hereafter be changed by the authorities of the aforesaid town.

§ 3. This act shall take effect immediately.

CHAPTER 517, LAWS OF 1873.

AN ACT to amend an act entitled "An act to amend an act to authorize the construction of a railway and tracks in the towns of West Farms and Morrisania, passed May second, eighteen hundred and sixty-three," passed April twelfth, eighteen hundred and seventy-one.

PASSED May 15, 1873.

The People of the State of New York, represented in Senate and Assembly, do enact as follows:

Section 1. Section nine of an act entitled "An act to authorize the construction of a railway and tracks in the towns of West Farms and Morrisania," passed May second, eighteen hundred and sixty-three, as amended by chapter eight hundred and ninety-two of the laws of eighteen hundred and sixty-seven; and by chapter six hundred and fifty-eight of the laws of eighteen hundred and seventy-one, is hereby further amended by adding to the end thereof as follows: It shall be also lawful, and the corporation formed under this act is hereby authorized, to lay single or double tracks and operate the same by horse power through and along Westchester avenue or southern Westchester turnpike, from its junction with Third avenue or Boston road, in the town of Morrisania, through the towns of West Farms and Westchester to Westchester village; and through and along Morris street and Locust avenue in the town of West Farms, from the Harlem river to West Farms village. No greater rate of fare than five cents per mile or for any distance less than one mile, in addition to the fare authorized by section five of an act entitled "An act to authorize the construction of a railway and tracks in the towns of West Farms and Morrisania," passed May second, eighteen hundred and sixty-three shall be charged on either of the branch tracks of said corporation authorized by this section.

§ 2. This act shall take effect immediately.

CHAPTER 553, LAWS OF 1874.

AN ACT to amend an act entitled "An act to authorize the construction of a railway and tracks in the towns of West Farms and Morrisania," passed May second, eighteen hundred and sixty-three.

PASSED May 22, 1874.

The People of the State of New York, represented in Senate and Assembly, do enact as follows:

SECTION 1. Section eight of an act entitled "An act to authorize the construction of a railway and tracks in the towns of West Farms and Morrisania," passed May second, eighteen hundred and sixty-three, is hereby amended as follows:

§ 8. It shall be lawful, and the corporation formed under this act is hereby authorized, to lay single or double tracks, and use and operate the same, through and along St. Ann's avenue to its southern terminus and through and along Van Stoll street, otherwise known as One Hundred and Thirty-eighth street, from Third avenue to the Harlem river; and also through and along College avenue from Kingsbridge road to its intersection with the road known as Fordham and Pelham avenue, and through and along said last named avenue to Pelham Bridge, in the town of Westchester; and also from the present terminus of the tracks of the said corporation at or near Locust avenue, in the late town of West Farms through and along the main road leading in an easterly direction to the point where the said main road intersects the Westchester turnpike, in the said town of Westchester. But no greater fare than five cents per mile, or for any distance, in addi-

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tion to the fare authorized by section five of the act hereby amended shall be charged on either of the tracks of said corporation authorized by this act.

§ 2. This act shall take effect immediately.

CHAPTER 295, LAWS OF 1875.

AN ACT to amend chapter three hundred and sixty-one of the laws of eighteen hundred and sixty-three, entitled "An act to authorize the construction of a railway and tracks in the towns of West Farms and Morrisania," passed May thirteen, eighteen hundred and seventy-five.

The People of the State of New York represented in Senate and Assembly, do enact as follows:

SECTION 1. Section eight of chapter two hundred and sixty-one of the laws of eighteen hundred and sixty-three, entitled "An act to authorize the construction of a railway and tracks in the towns of West Farms and Morrisania," is hereby amended so as to read as follows:

§ 8. It shall be lawful, and the corporation formed under this act is hereby authorized, to lay single or double tracks, and use and operate the same, through and along St. Ann's avenue to its southern terminus, and through and along Van Stoll street, otherwise known as One Hundred and Thirty-eighth street, from Third avenue to the Harlem river; and also through and along College avenue from Kingsbridge road to its intersection with the road known as Fordham and Pelham avenue, and through and along said last named avenue to Pelham bridge, in the town of Westchester; and also from the present terminus of the tracks of said corporation at or near Locust avenue, in the late town of West Farms, through and along the main road leading in an easterly direction to the point where said named road intersects the Westchester turnpike in the said town of Westchester. But no greater fare than five cents per mile, or for any distance less than a mile in addition to the fare authorized by section five of the act hereby amended, shall be charged on either of the tracks of said corporation authorized by this act.

§ 2. This act shall take effect immediately.

CHAPTER 598, LAWS OF 1894.

AN ACT to amend chapter three hundred and sixty-one of the laws of eighteen hundred and sixty-three, entitled "An act to authorize the construction of a railway and tracks in the town of West Farms and Morrisania, as subsequently amended."

BECAME a law May 9, 1894, with the approval of the Governor. Passed, three-fifths being present.

The People of the State of New York represented in Senate and Assembly, do enact as follows:

SECTION 1. The title of chapter three hundred and sixty-one of the laws of eighteen hundred and sixty-three, entitled "An act to authorize the construction of a railway and tracks in the town of West Farms and Morrisania, as subsequently amended," is hereby amended to read as follows: "An act to authorize the construction of a railway and track in the towns of West Farms, Morrisania, Westchester, East Chester and Mount Vernon."

- § 2. Any and all proceedings heretofore taken in substantial compliance with the provisions of chapter three hundred and sixty-one of the laws of eighteen hundred and sixty-three, as now amended, are hereby approved, ratified and confirmed.
 - § 3. This act shall take effect immediately.

CONSENT OF LOCAL AUTHORITIES TO EXTENSION OF ROUTE.

Whereas, The Harlem Bridge, Morrisania and Fordham Railway Company, by resolution of their board of directors, and by consent of one-half in value of property owners on the line of

the extension, as required by law, have taken proceedings for the extension of the tracks of their road from the present southern terminus therefor, to, along and upon the Harlem bridge and Third avenue to One Hundred and Twenty-ninth street; and,

Whereas, The completion of the elevated railroad of Third avenue to that point makes it desirable that the application of the first-named road for authority to extend should be granted; and that the facilities to be offered for rapid transit over the elevated road should be enjoyed by the pople of the Twenty-third and Twenty-fourth wards; therefore, be it

Resolved, That permission be, and the same is hereby, granted to the Harlem Bridge and Morrisania and Fordham Railway Company to extendits tracks to, upon and across the Harlem bridge, and on and along Third avenue to a point at or near One Hundred and twenty-ninth street, and to operate said road so extended, and to run ears thereon, with such switches, turn-outs and tables as may be necessary; provided, that said company shall run cars from said terminus until 1 o'clock a. m., and shall not charge any increased fares by reason of such extension; provided, that the said bridge be put into good repair after the laying of said tracks, at the expense of said company; and that the said company keep said bridge in good repair between the tracks; and that this permission shall continue only during the pleasure of the common council.

Adopted by the board of aldermen, December 17, 1878.

Received from his honor, the mayor, December 20, 1878, with his objections thereto.

In board of aldermen, December 31, 1878, taken up and considered, as provided in section 13, chapter 335, Laws of 1873, and adopted, notwithstanding the objections of his honor, the mayor, three-fourths of all the members elected voting in favor thereof.

(Signed.)

F. J. TWOMEY,

Clerk Common Council.

THE MELROSE AND WEST MORRISANIA RAILROAD COM-PANY.

Articles of Association.

First. The name of said company shall be "The Melrose and West Morrisania Railroad Company."

Second. The said company is to continue one thousand years from the day of the date hereof.

Third. The road of said company is to be constructed in the city and county of New York, and the streets and avenues in which and the points to and from which, the said road is to be constructed, maintained and operated, are as follows:

Beginning at North Third avenue, at or near East One Hundred and Thirty-eighth street, at the tracks of the Harlem Bridge, Morrisania and Fordham Railway Company, running thence northerly through, upon and along East Railroad avenue, with double tracks to East One Hundred and Fifty-sixth street; thence westerly through, upon and along East One Hundred and Fifty-sixth street, and across the tracks of the New York and Northern Railway Company, with double tracks to West Railway avenue; thence northerly through, upon and along West Railroad avenue, with double tracks, to Morris avenue; thence northerly through, upon and along Morris avenue, with double tracks, to East One Hundred and Sixty-first street.

Also beginning at East One Hundred and Forty-ninth street and Morris avenue, running thence easterly, with single track, to Cortlandt avenue; thence running northerly through, upon and along Cortlandt avenue, with double tracks, to East One Hundred and Sixty-first street.

Also from tracks on Morris avenue and East One Hundred and Forty-eighth street, running then easterly through, upon and along East One Hundred and Forty-eighth street, with single tracks, to Cortlandt avenue; thence through, upon and along Cortlandt avenue, with double tracks, to connect with the tracks of East One Hundred and Forty-ninth street.

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Also from the track on Cortlandt avenue at East One Hundred and Forty-eighth street, thence southerly upon and along Cortlandt avenue, with double tracks, to the intersection of Cortlandt avenue and North Third avenue, and to the tracks of the Harlem Bridge, Morrisania and Fordham Railway Company.

Also, beginning at North Third avenue at or near One Hundred and Thirty-eighth street, running thence westerly through, upon and along East One Hundred and Thirty-eighth street, with double tracks, to Mott avenue; thence northerly through, upon and along Mott avenue, with double tracks, to East One Hundred and Sixty-fifth street; thence easterly through, upon and along East One Hundred and Sixty-fifth street, with double tracks, to the entrance of Fleetwood Park.

Also, beginning at the intersection of Mott avenue with East One Hundred and Sixty-first street; thence running easterly through, upon and along East One Hundred and Sixty-first street, with double tracks, to the intersection of said street with North Third avenue, and to the tracks of the Harlem Bridge, Morrisania and Fordham Railway Company.

Fourth. The length of said route, as near as the same can be ascertained, is $4\frac{1}{2}$ miles, and the same is located entirely within the city and county of New York.

Fifth. The capital stock of said company shall be \$300,000, and the same shall be divided into 6,000 shares of \$50 each.

Sixth. The following are the names and places of residence of the first directors in said company, and who shall manage its affairs for the first year or until others are elected, to wit:

Name.	Residence.
William Cauldwell	New York city.
Matthew B. Wynkoop	New York city.
John J. Hallenbeck	Montclair, N. J.
Henry Spratley	New York city.
Edwin Bedell	New York city.
Albert B. Whitney	New York city.
Joseph T. Thompson	New York city.
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Seventh. Each of the subscribers to these articles of association agrees to take the number of shares of stock in said company set opposite to his name.

In witness whereof we have hereunto set our hands and seal this 12th day of August, in the year 1886.

Name and residence.	No.	
	shares.	
William Cauldwell, 1086 Boston avenue, New York		
city	15	[L. S.]
Henry Spratley, 1033 Boston avenue, New York city.	115	[L. S.]
J. J. Hallenbeck, Montclair, N. J	15	L. s.
Albert B. Whitney, New York city	15	L. s.
Elijah Whitney, New York city	2	L. s.
Fred. W. Kuck, New York city	2	L. s.
M. B. Wynkoop, New York city	15	L. s.
Joseph T. Thompson, New York city	2	L. s.
Edwin Bedell, New York city	8	L. s.
Edwin J. Hart, 1189 Franklin avenue, New York city.	2	L. s.
James Carrigan, Third avenue, One Hundred and		
Seventieth street, New York city	2	[L. S.]
Louis Spratley, 1189 Franklin avenue, New York		
city	10	[L. s.]
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CITY AND COUNTY OF NEW YORK, 88:

William Cauldwell, Henry Spratley and Mathew B. Wynkoop, three of the directors named in the preceding articles of association, being duly sworn, depose and say each for himself, that he is a director of the above-named, the Melrose and West Morrisania Railroad Company; that more than \$1,000 of the stock for every mile of railroad proposed to be constructed has been subscribed in good faith to the articles of association, and 10 per cent. has been paid in cash thereon in good faith to the directors named in said articles of association, and that it is intended in good faith to construct, maintain and operate the road mentioned in the said articles of association.

WILLIAM CAULDWELL. HENRY SPRATLEY. M. B. WYNKOOP.

Sworn to before me this 18th day of August, 1886.

O. B. Lewis,

Notary Public, Kings County.

(Certificate filed in New York county.)

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CITY AND COUNTY OF NEW YORK, 88 .:

On the 12th day of August, 1886, before me personally came William Cauldwell, Henry Spratley, John J. Hallenbeck, William E. Hallenbeck and Louis Spratley, and on the 13th day of August, before me, personally, came Albert B. Whitney, Elijah Whitney, Frederick Kuck, and James Carrigan, Edwin J. Hart and Matthew B. Wynkoop, and on the 16th day of August, 1886, before me, personally, came Joseph T. Thompson, all to me known, and known to me to be the individuals described in and who executed the foregoing articles of association, and duly and severally acknowledged to me that they executed the same.

Waldo Hutchins, Jr., Notary Public, New York County.

CITY AND COUNTY OF NEW YORK, 88 .:

On the 18th day of August, 1886, before me personally came Edwin Bedell, to me known, and known to me to be one of the individuals described in and who executed the foregoing articles of association, and duly acknowledged that he executed the same.

WILLIAM MURPHY (97),

Notary Public, New York County.

(Filed in office of Secretary of State, August 19, 1886.)

THE NORTH THIRD AVENUE AND FLEETWOOD PARK RAILROAD COMPANY.

Articles of Association.

First. The name of said company shall be "The North Third Avenue and Fleetwood Park Railroad Company."

Second. The said company is to continue one thousand years from the day of the date hereof.

Third. The road of said company is to be constructed in the city and county of New York, and the streets and avenues in which, and to the point to and from which the said road is to be

constructed, maintained and operated, are as follows: Beginning at a point on the easterly side of Third avenue at or near East One Hundred and Twenty-ninth street, thence northerly along Third avenue with double tracks to Harlem Bridge; thence northerly, over, along and upon Harlem bridge and north Third avenue with double tracks to the intersection of North Third avenue with Morris avenue, at or near East One Hundred and Thirty-eighth street; thence northerly with double tracks through, upon and along Morris avenue to East Railroad avenue; thence northerly, through, upon and along East Railroad avenue, with double tracks to East One Hundred and Fifty-eighth street; thence westerly, through, upon and along East One Hundred and Fifty-eighth street and across the tracks of the New York and Harlem Railroad company and West Railroad avenue, with double tracks to Morris avenue; thence northerly, through, upon and along Morris avenue, with double tracks to the intersection of Morris avenue with One Hundred and Sixty-fifth street.

Fourth. The length of said road as near as the same can be ascertained, is one and nine-tenth miles, and the same is located wholly within the city and county of New York.

Fifth. The capital stock of said company shall be \$100,000, and the same shall be divided into 2,000 shares of \$50 each.

Name.	Residence.
Thomas H. Conover	Jersey City.
Edwin J. Hart	New York city.
David E. Babcock	New York city.
Matthew B. Wynkoop	New York city.
Frederick H. Crumb	.River Edge, N. J.
John J. Hallenbeck	Montclair, N. J.
J. Lewis Kuck	New York city.

Seventh. Each of the subscribers of these articles of association agrees to take the number of shares of stock in said company set opposite to his name.

In witness whereof we have hereunto set our names and seals this 23d day of January, in the year 1890.

Name and residence.	No. of shares	
Edwin J. Hart, New York city	4	[L. S.]
Thomas H. Conover, Jersey City	5	[L. S.]
Rodney F. Bates, New York city	5	[L. S.]
Milton J. Smith, Brooklyn	5	[L. S.]
J. Lewis Kuck, New York city	5	[L. S.]
William H. Craig, New York city	4	[L. S.]
Matthew W. Wynkoop, New York city	4	[L. S.]
David E. Babcock, New York city	4	[L. S.]
William F. Scott, New York city	3	[L. S.]
Willis Benner, New York city	2	[L. S.]
John J. Hallenbeck, Montclair, N. J	2	[L. S.]
Frederick H. Crumb, River Edge, N. J	3	[L. S.]
James H. Ackerman, Passaic, N. J	3	[L. S.]
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CITY AND COUNTY OF NEW YORK, 88 .:

Matthew B. Wynkoop, Thomas H. Conover and J. Lewis Kuck, three of the directors named in the preceding articles of association, being duly sworn depose and say and each for himself says that he is a director of the above named, the North Third Avenue and Fleetwood Park Railroad Company; that more than \$1,000 of stock for every mile of railway proposed to be constructed has been subscribed in good faith to the articles of association and 10 per cent. has been paid in in cash thereon in good faith to the directors named in said articles of association, and that it is intended in good faith to construct, maintain and operate the road mentioned in the said articles of association.

MATTHEW B. WYNKOOP, THOMAS H. CONOVER, J. LEWIS KUCK.

Sworn to before me this 23d day of January, 1890.

WILLIAM H. CRAIG, JR.,

Commissioner of Deeds, New York City and County.

STATE OF NEW YORK, CITY AND COUNTY OF NEW YORK, 88.:

On the 23d day of January, 1890, before me personally appeared Edwin J. Hart, Thomas H. Conover, Milton J. Smith, J. Lewis Kuck, William H. Craig, Matthew B. Wynkoop, David E. Babcock, William F. Scott, Willis Bender, John J. Hallenbeck, Frederick H. Crum and James H. Ackerman, and on the 24th day of January, 1890, before me personally appeared Rodney F. Bates, all to me known and known to me to be the persons described in and who executed the foregoing articles of association, and they severally duly acknowledged to me they executed the same.

WILLIAM H. CRAIG, JR.,

Commissioner of Deeds, New York City and County. (Filed in the office of the Secretary of State, January 27, 1890.)

CHARTER OF UNION RAILWAY COMPANY OF NEW YORK CITY.

Chapter 340, Laws 1892.

AN ACT to amend chapter three hundred and sixty-one of the laws of eighteen hundred and sixty-three, entitled "An act to authorize the construction of a railway and tracks in the towns of West Farms and Morrisania," and all acts amendatory thereof.

APPROVED by the Governor April 20, 1892. Passed, three-fifths being present.

The People of the State of New York represented in Senate and Assembly, do enact as follows:

SECTION 1. Section six of chapter three hundred and sixty-one of the laws of eighteen hundred and sixty-three, entitled "An act to authorize the construction of a railway and plant in the towns of West Farms and Morrisania," is hereby amended so as to read as follows:

§ 6. The corporation formed under this act may, from time to time, consolidate its capital stock and property with the capital stock and property of any street surface railroad company incorNo. 98.]

porated, for the purpose of building or operating any street surface railroad operated or to be operated by animal or horse power, or by cable or electricity, or any power other than locomotive steam power, the line of which is north or east of the Harlem river, in the city of New York or the county of Westchester, or the southern terminus of which does not extend more than 1,000 feet south of the southern terminus of any bridge crossing the Harlem river, and which may cross, intersect or prolong the line of said railway of such corporation or any of its branches or extensions or may acquire by purchase or lease for years or other term, the property and franchises of any such street surface railroad company now or hereafter incorporated for the construction and operation of any such street surface railroad to be operated by animal or horse power or by cable, electricity, or any power other than locomotive steam power in said city or county north or east of the Harlem river, such consolidation, purchase or lease to be on such terms and conditions as the directors of such corporations may agree upon, and be executed under the corporate seals of said companies respectively, by their president, provided that the same shall be first ratified by the votes of not less than two-thirds in interest of the stockholders of each of said companies voting in person or by proxy therefor at meetings to be especially called for the purpose of considering such consolidation, purchase or lease, notice whereof shall be given by publication at least once a week for four consecutive weeks prior to the date of such meetings respectively, in two or more daily newspapers published in the city of New York, and one copy whereof shall be delivered or mailed to each of the said stockholders whose post-office address is known to the company whereof he is a stockholder, the name of the corporation formed by such consolidation shall be the Union Railway Company of New York city; the agreement of such consolidation or indenture of purchase or lease shall contain a statement of the amount of capital stock deemed by the directors of said companies to be necessary for the purpose of carrying into effect such consolidation, purchase or lease, the par value of each share of capital stock and the number of shares to be issued therefor, together with a description and map of the route and the termini of the respective railroads so consolidated or leased, whether at the time constructed or intended to be constructed. The original of said agreement of consolidation, and of said indenture of convenience of lease, or a copy thereof certified to be correct, under the seals of said corporation by the secretaries thereof shall be filed in the office of the secretary of state and from the time of such filing shall be taken and deemed to be the agreement and acts of consolidation or indenture of conveyance or lease duly certified by the secretary of state under his official seal, shall be evidence in all courts and places for the existence of said corporation, and that the provisions of this act have been fully observed and complied with. Said company may, from time to time, by consent of two-thirds in interest of the holders of its capital stock, at any meeting called for that purpose whereof notice shall have been given in the manner aforesaid, increase its capital stock to such an amount as it may be deemed necessary, not, however, exceeding two millions of dollars. Said company may issue its negotiable bonds bearing interest at any rate approved by the board of directors thereof, for the purpose of providing funds for the execution of any of the purposes contemplated by this act, said bonds to be payable at any time and place which may be agreed on, and said company may also mortgage its railroad property and franchises or any part thereof, acquired or to be acquired, as security for payment of said bonds and interest, provided that the amount of such bonds outstanding at any time shall not exceed the amount of the total capital stock of said company.

§ 2. All conditions, burdens, obligations and liabilities imposed by law or contract upon any railroad company or person so consolidating with, leasing or conveying to the said Harlem Bridge, Morrisania and Fordham Railroad Company, or to the said the Union Railway Company of New York city, shall be preserved unimpaired thereby, and shall be assumed, borne and performed by the said Union Railway Company, so far as the property and

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franchises so acquired by it by consolidation, lease or conveyance, but no further.

- § 3. The provisions of sections ninety-three, ninety-five and ninety-eight of chapter five hundred and sixty-five of the laws of eighteen hundred and ninety, entitled "An act in relation to the railroad, constituting chapter thirty-nine of the general law," and of any act amendatory of or supplementary to said section, shall not extend to the said Union Railway Company, nor shall said company be bound by any of the provisions thereof. The said company shall keep in permanent repair that portion of the street between the rails of its tracks after the same shall have been paved or macadamized.
- § 4. The president and treasurer of the said Union Railway Company shall annually make a verified statement to the comptroller of the city of New York, on or before the first day of September in each year, of the gross amount of its receipts for the year ending June thirtieth next preceding and also a detailed account of its daily earnings during that period, and the books of said company shall be open to inspection and examination by said comptroller, or his duly appointed agent, for the purpose of ascertaining the correctness of its report as to its gross earnings, and may take proofs in relation thereto. Whenever such earnings shall, during any period of six months, exceed an average of one thousand seven hundred dollars per day, then, and in that event, the said company shall thereafter annually, on the first day of December, pay into the treasury of the city of New York, to the credit of the sinking fund of the city, a sum equaling in the aggregate one per centum of its gross earnings; and an additional annual payment of one per cenum of such gross earnings shall be made by said company in like manner for each multiple of one thousand seven hundred dollars per day of such average gross The gross receipts of all the lines of road owned by said company whether operated by said company or by lessees thereof or of any portion thereof shall be deemed gross earnings of said company within the meaning of this section. The payment of the percentage of gross receipts herein provided for shall

be in lieu of all other percentages which any of the roads consolidating and conforming the said Union Railway Company may theretofore be liable to pay on its receipts.

§ 5. This act shall take effect immediately.

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CONSOLIDATED AGREEMENT.

This joint agreement, made the 2d day of July, 1892, between the Harlem Bridge, Morrisania and Fordham Railway Company, party of the first part, the Melrose and West Morrisania Railroad Company, party of the second part, and the North Third Avenue and Fleetwood Park Railroad Company, party of the third part, witnesseth:

That the said Harlem Bridge, Morrisania and Fordham Railway Company, said party of the first part, the capital stock of which is \$350,000, consisting of 7,000 shares of the par value of \$50 each, is a street surface railway company, incorporated under the laws of the State of New York, for the purpose of operating a street surface railroad by power other than steam locomotive power, upon a route the map of which is heretofore annexed, and which route and the termini thereof are as follows:

Commencing at or near One Hundred and Thirtieth street or Third avenue, along said avenue to and across Harlem bridge.

Commencing at or near the termination of the Harlem or Cole's bridge on the Westchester side, on the Boston road, and running along said road to a point where the said road intersects with Fordham avenue, and thence along said Fordham avenue with necessary turnouts, to the Kings Bridge road, thence along the same to the Harlem Railroad, at or near its depot at Fordham.

Along One Hundred and Thirty-eighth street, in the town of Morrisania, to Port Morris, and along William street, Grove street, Butternut street, Cedar street and River avenue, in said town of Morrisania, and across Cromwell's creek to the village of Highbridgeville, the said railway tracks not to be laid upon or along any part of Central avenue in said town, except across the

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same and along the Boston post road to the village of West Farms and the village of Westchester, in the town of Westchester.

Through Lincoln avenue and One Hundred and Thirty-third street, or through both of said streets and avenues, in the town of Morrisania, if necessary, to connect the ferry of Morrisania Steamboat Company.

Along Westchester avenue or Southern Westchester turnpike, from its junction with Third avenue or Boston road, in the town of Morrisania, through the towns of West Farms and Westchester to Westchester village; and through and along Morris street and Locust avenue, in the town of West Farms, from the Harlem Railroad to West Farms village.

Through and along St. Ann's avenue to its southern terminus, and through and along Van Stoll street, otherwise known as One Hundred and Thirty-eighth street, from Third avenue to the Harlem river, and also through and along College avenue from Kings Bridge road to its intersection with the road known as Fordham and Pelham avenue, and through and along said last named avenue to Pelham bridge, in the town of Westchester, and also from the present terminus of the tracks of said corporation, at or near Locust avenue in the late town of West Farms through and along the main road leading in an easterly direction to the point where said main road intersects the Westchester turnpike in the said town of Westchester.

That the said Melrose and West Morrisania Railroad Company, said party of the second part, the capital stock of which is \$300,000, dividend into 6,000 shares of the par value of \$50 each, is a street surface railway company, incorporated under the laws of the State of New York, for the purpose of operating a street surface railroad by power other than steam locomotive power, upon a route, the map of which is hereto annexed, and which route, and the termini thereof, is as follows:

Beginning at North Third avenue, at or near East One Hundred and Thirty-eighth street, at the tracks of the Harlem Bridge, Morrisania and Fordham Railway Company, running thence northerly through, upon and along East Railroad avenue,

with double tracks, to East One Hundred and Fifty-sixth street; thence westerly through upon and along East One Hundred and Fifty-sixth street and across the tracks of the New York and Harlem Railroad Company, with double tracks, to West Railroad avenue; thence northerly through, upon and along West Railroad avenue, with double tracks, to Morris avenue; thence northerly through, upon and along Morris avenue, with double tracks, to East One Hundred and Sixty-first street.

Also, beginning at East One Hundred and Forty-ninth street and Morris avenue; running thence easterly, with single track, to Courtlandt avenue; thence running northerly through, upon and along Courtlandt avenue with double tracks to East One Hundred and Sixty-first street.

Also, from tracks on Morris avenue and East One Hundred and Forty-eighth street; running thence easterly through, upon and along East One Hundred and Forty-eighth street with single track to Courtlandt avenue, with double tracks to connect with the tracks at East One Hundred and Forty-ninth street.

Also, from the track on Courtlandt avenue at East One Hundred and Forty-eighth street; thence southerly upon and along Courtlandt avenue with double tracks to the intersection of Courtlandt avenue and North Third avenue, and to the tracks of Harlem Bridge, Morrisania and Fordham Railway Company.

Also, beginning at North Third Avenue, at or near East One Hundred and Thirty-eighth street; running thence westerly through, upon and along East One Hundred and Thirty-eighth street, with double tracks, to Mott avenue; thence northerly through, upon and along East One Hundred and Sixty-fifth street, with double tracks, to the entrance of Fleetwood Park.

Also, beginning at the intersection of Mott avenue with East One Hundred and Sixty-first street; thence running easterly through, upon and along East One Hundred and Sixty-first street with double tracks to the intersection of said street, with North Third avenue and to the tracks of the Harlem Bridge, Morrisania and Fordham Railway Company.

And also may construct such switches, sidings, turnouts and turntables and suitable stands, as may be necessary for the convenient working of such road. That the said North Third Avenue and Fleetwood Park Railroad Company, party of the third part, the capital stock of which is \$100,000, divided into 2,000 shares of the par value of \$50 each, is a street surface railway company, incorporated under the laws of the State of New York, for the purpose of operating a street surface railroad, by power other than steam locomotive power, upon a route, the map of which is hereto annexed, and which route, and the termini thereof are as follows:

Beginning at a point on the easterly side of Third avenue at or near East One Hundred and Twenty-ninth street; thence northerly along Third avenue, with double tracks to Harlem bridge; thence northerly over, along and upon Harlem bridge and North Third avenue with double tracks to the intersection of North Third avenue with Morris avenue at or near East One Hundred and Thirty-eighth street; thence northerly with double tracks through, upon and along Morris avenue to East Railroad avenue, thence northerly through upon and along East Railroad avenue, with double tracks to East One Hundred and Fifty-eighth street; thence westerly through, upon and along East One Hundred and Fiftyeighth street, and across the tracks of the New York and Harlem Railroad Company and West Railroad avenue with double tracks to Morris avenue; thence northerly through, upon and along Morris avenue, with double tracks to the intersection of Morris avenue with One Hundred and Sixty-fifth street.

That this agreement has been submitted to the stockholders of each of said companies at the respective meetings thereof specially called for the purpose of considering the subject of consolidation herein set forth and pursuant to a notice given by publication at least once a week for four consecutive weeks prior to the date of such meeting respectively in two or more daily newspapers published in the city of New York; one copy thereof

was delivered or mailed to each of said stockholders whose postoffice address was known to the company, and has been ratified and adopted at such meeting by more than two-thirds in interest of the stockholders of the respective companies.

That the amount of capital stock deemed necessary by the respective boards of directors of each of said companies for the purpose of carrying into effect this consolidation is \$2,000,000, divided into 20,000 shares of the par value of \$100 each.

That in consideration of the mutual covenants and agreements herein contained, the said parties hereto do hereby merge and consolidate their respective capital stocks, franchises and property, one with another, so as to form one corporation under and in pursuance of chapter 361 of the Laws of 1863, and various acts amendatory thereof, including chapter 340 of the Laws of 1892, and by these presents the said parties do hereby covenant and agree upon and prescribe the terms and conditions of such consolidation and the mode of carrying the same into effect, which said terms and condition and mode of carrying the same into effect they mutually covenant and agree to observe, to wit:

First.— That the name of the corporation here formed by said consolidation shall be the "Union Railway Company of New York City."

Second.— That the number of directors of said new corporation hereby formed shall be nine.

Third.— That the names of and places of residence of the directors and other officers of said new corporations who shall be the first directors and officers thereof, and shall manage its affairs for the first year, or until others shall be chosen in their places are as follows, to wit:

Charles A. Stadler, 224 East Forty-fourth street, New York city. William Cauldwell, 9 Park Row, New York city.

Anthony N. Brady, Albany, N. Y.

Robert C. Pruyn, Albany, N. Y.

John C. De La Vergne, 55 East Eightieth street, New York city. William Shaw, Troy, N. Y.

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Thomas W. Olcott, 169 West One Hundred and Thirtieth street, New York city.

John W. McNamara, Albany, N. Y.

Edward A. Maher, 212 Lennox avenue, New York.

President. - Edward A. Maher, New York, N. Y.

Vice-President .- Charles A. Stadler, New York, N. Y.

Secretary and Treasurer. Thomas W. Olcott, New York, N. Y.

Fourth.—That the capital stock of said corporation shall be \$2,000,000, consisting of 20,000 shares of the par value of \$100 each.

That the manner of converting the capital stock of each of said companies, parties hereto into the capital stock of said new corporation shall be as follows:

The capital stock of the parties hereto of the second and third parts, at the rate of dollar for dollar, and the stock of the party of the first part hereto, at the rate of two and 2337-10000 dollars for a dollar, shall be convertible into the capital stock of said consolidated company and new corporation, and upon presentation and surrender of any outstanding certificates of stock in either of said companies, the parties hereto certify for like amount of stock in said consolidated company and new corporation shall be issued to the holder thereof.

That the corporation hereby created may purchase, acquire, hold or dispose of the stock, bonds or other indebtedness of any corporation, domestic or foreign, and issue in exchange thereof its stocks, bonds or other obligations.

Sixth.—That there shall be an election of directors for said incorporation on the second Monday of January, in the year 1893, and that there shall be an annual election for directors of said new corporation on the second Monday of January in each and every year thereafter.

That the said directors shall be chosen by a majority of the votes of the stockholders voting at such election in such a manner as may be prescribed in the by-laws of the said consolidated company, and they shall continue to be the directors of such concolidated company for one year from the date of their election and until others are chosen and qualified in their places.

In such election each stockholder shall be entitled to one vote, either in person or by proxy, for each share of stock held by such stockholder for thirty days previous to such election.

Vacancies occurring in the board of directors shall be filled in such manner as shall be prescribed in the by-laws of said consolidated company.

The president, vice-president, treasurer and secretary shall be chosen by ballot by the directors immediately succeeding the annual election of directors, and vacancies shall be filled as provided in the by-laws of said consolidated company.

The directors of the said new company may, from time to time choose or appoint such other officers as they deem advisable.

Seventh.—That all conditions, burdens, obligations and liabilities imposed by law or contract upon any of the railroad companies hereby consolidating, shall be preserved unimpaired by such consolidation, and shall be assumed, borne and performed by the new corporation hereby created, so far as the same relate to, concern or bind, and to the extent of, the property and franchise so acquired by it by consolidation, but no further.

In testimony whereof, the said parties of the first, second and third part pursuant to resolutions of their respective board of directors have executed this intrument and certificate in duplicate, and have hereunto caused their corporate names to be signed and their corporate seals to be affixed by their respective presidents the day and year first above written.

HARLEM BRIDGE, MORRISANIA AND FORDHAM RAIL-ROAD COMPANY.

[L. S.]

By HENRY SPRATLEY,

President.

MELROSE AND WEST MORRISANIA RAILROAD COMPANY.

[L. S.]

By WILLIAM CAULDWELL,

President.

NORTH THIRD AVENUE AND FLEETWOOD PARK RAIL-ROAD COMPANY.

[L. S.]

By M. B. WYNKOOP,

President.

STATE OF NEW YORK, CITY AND COUNTY OF NEW YORK,

Be it remembered that, on this second day of July, 1892, at the city of New York, before me personally came Henry Spratley, President of the Harlem Bridge, Morrisania and Fordham Railway Company, with whom I am personally acquainted, who, being by me duly sworn, said that he resides at 43 East Sixty-eight street, in the city of New York; that he is the president of Harlem Bridge, Morrisania and Fordham Railway Company; that he knows the corporate seal of said company; that the seal affixed to the foregoing instrument is by authority of the board of directors of said company; and that he signed his name thereto by the like authority and acknowledged the same to be the act and deed of the said Harlem Bridge, Morrisania and Fordham Railroad Company for the use and purpose therein mentioned.

In witness whereof, I have hereunto set my hand and affixed my official seal the day and year first above written.

GEORGE W. VULTEE,

[L. S.] Notary Public (54), City and County of New York.

STATE OF NEW YORK, CITY AND COUNTY OF NEW YORK,

Be it remembered, that on this second day of July, 1892, at the city of New York, before me personally came William Cauldwell, President of the Melrose and Morrisania Railroad Company, with whom I am personally acquainted, who being by me duly sworn, said that he resides at 1086 Boston road, New York city; that he is president of the Melrose and West Morrisiana Railroad Company; that he knows the corporate seal of said company; that the seal affixed to the foregoing instrument is such corporate seal; that it was affixed to the foregoing instrument by authority of the board of directors of said company, and that he signed his name thereto by the like authority and acknowledged the same to be the act and deed of the said Melrose and West Morrisania Railroad Company for the use and purpose therein mentioned.

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In witness whereof, I have hereunto set my hand and affixed my official seal the day and year first above written.

GEORGE W. VULTEE,

[L. s.] Notary Public (54), City and County of New York.

STATE OF NEW YORK, CITY AND COUNTY OF NEW YORK, $\$ 88.:

Be it remembered, that on this second day of July, 1892, at the city of New York, before me personally came Matthew B. Wynkoop, president of the North Third Avenue and Fleetwood Park Railroad Company, with whom I am personally acquainted, who, being by me duly sworn, says that he resides at 14 East Forty-seventh street, in the city of New York; that he is president of the North Third Avenue and Fleetwood Park Railroad Company; that he knows the corporate seal of said company; that the seal affixed to the foregoing instrument is such corporate seal; that it was affixed to the foregoing instrument by authority of the board of directors of said company, and that he signed his name thereto by the like authority and knowledged the same to be the act and deed of the said North Third Avenue and Fleetwood Park Railroad Company, for the use and purpose therein mentioned.

In witness whereof, I have hereunto set my hand and affixed my official seal the day and year first above written.

GEORGE W. VULTEE,

[L. s.] Notary Public (54), City and County of New York. (Filed with Secretary of State, July 5, 1892.)

STATEMENT OF PROPOSED EXTENSION.

First Extension.

The Union Railway Company of New York city proposes to construct, maintain, operate and extend a street surface railroad for public use in conveying persons and property in the city of New York, and that the said railroad is proposed to be constructed, extended, maintained and operated with double tracks connection with the tracks of the said company already constructed, or that may be constructed, as may be proper, upon and along the surface

of the following streets, avenues and highways in the city of New York; that is to say:

Beginning at the McComb's Dam Bridge, on Jerome avenue and extending through and along said avenue to the city line.

Beginning on Morris avenue, at its intersection with Third avenue, and extending north through and along said Morris avenue to Fordham Landing on (High Bridge) road.

Beginning at the Harlem river on Willis avenue, and extending north through and along said Willis avenue to its intersection with Melrose avenue; thence through and along Melrose avenue to its intersection with Webster avenue, to its intersection with the Bronx River road; thence through and along said road to the city line.

Beginning at the city line at the Bronx river on Tremont avenue, and extending west through and along said Tremont avenue to its intersection with Sedgwick avenue and Cedar avenue, thence through and along Cedar avenue to its intersection with Riverview terrace, thence southerly through and along Riverview terrace to its intersection with Sedgwick avenue, also west through and along Dock street from its intersection with Riverview terrace to the tracks of the New York and Northern Railroad Company.

Beginning at the intersection of Olin avenue, with Webster avenue, and extending east through and along said Olin avenue to the city line.

Beginning at Washington bridge, on Boscobel avenue, and extending east through and along said avenue to its intersection with Jerome avenue.

Beginning at the terminus of the tracks of the Harlem Bridge, Morrisania and Fordham Railway Company, at Fordham, extending west over and across the bridge of the New York and Harlem railroad to Kingsbridge road; thence through and along said road to its intersection with High Bridge road; thence through and along said High Bridge road to its intersection with Sedgwick avenue; thence northerly along said avenue to its intersection

with Bailey avenue; thence along Bailey avenue to its intersection with Broadway at Kingsbridge.

Beginning on Sedgwick avenue at its intersection with Jerome avenue, and extending in a northerly direction through and along said avenue to the city line.

Together with the necessary connections, switches, turnouts, turntables and suitable stands for the convenient working of the said road, its extensions and branches.

Dated New York, July 6, 1892.

UNION RAILWAY COMPANY OF NEW YORK CITY,

[L. S.]

By EDWARD A. MAHER,

President.

STATE OF NEW YORK, CITY AND COUNTY OF NEW YORK,

Be it remembered, that on this 6th day of July, 1892, at the city of New York, before me personally came Edward A. Maher, president of the Union Railway Company of New York city, with whom I am personally acquainted, who being by me duly sworn, said that he resided at the city of New York; that he is president of the Union Railway Company of New York city; that he knows the corporate seal of said company; that the seal affixed to the foregoing instrument is such corporate seal; that it was affixed to the foregoing instrument by authority of the board of trustees of said company, and that he signed his name thereto by the like authority, and acknowledged the same to be the act and deed of the said Union Railway Company of New York city, for the use and purposes therein mentioned.

In witness whereof, I have hereunto set my hand and affixed my official seal the day and year first above written.

[L. S.] GEORGE W. VULTEE,

Notary Public (54), City and County of New York. (Filed with Secretary of State, July 7, 1892.)

PETITION TO COMMON COUNCIL.

First Extension.

To the Honorable the Common Council of the City of New York:

The petition of the Union Railway Company of New York city respectfully shows:

That your petitioner is a corporation duly authorized and incorporated under and in pursuance of an act of the Legislature of the State of New York, entitled "An act to amend chapter 361 of the Laws of 1863, entitled 'An act to authorize the construction of railway and tracks in the towns of West Farms and Morrisania and all acts amendatory thereof," passed April 20, 1892.

That the said company proposes to construct, extend, maintain and operate a street surface railroad for public use in conveying persons and property for compensation in the city of New York, with double tracks connecting with the tracks of the said company already constructed and as may be proper, upon and along the surface of the following streets, avenues and highways in the city of New York, that is to say:

Beginning at the McComb's Dam bridge on Jerome avenue and extending through and along said avenue to the city line.

Beginning on Morris avenue at its intersection with Third avenue, extending north through and along said Morris avenue to Fordham Landing (or High Bridge) road.

Beginning at the Harlem river on Willis avenue and extending north through and along said Willis avenue to its intersection with Melrose avenue; thence through and along said Melrose avenue to its intersection with Webster avenue; thence through and along said Webster avenue to its intersection with the Bronx River road; thence through and along said road to the city line.

Beginning at the city line at the Bronx river on Tremont avenue and extending west through and along said Tremont avenue to its intersection with Webster avenue and Burnside avenue; thence through and along said Burnside avenue to its intersection with Sedgwick avenue and Cedar avenue; thence through and along Cedar avenue to its intersection with Riverview terrace; thence southerly through and along Riverview terrace to its intersection with Sedgwick avenue, also west through and along Dock street from its intersection with the Riverview terrace to the tracks of the New York and Northern Railroad Company.

Beginning at the intersection of Olin avenue with Webster avenue and extending east through and along Olin avenue to the city line.

Beginning at Washington bridge, on Boscobel avenue, and extending east through and along said avenue to its intersection with Jerome avenue.

Beginning at the terminus of the tracks of the Harlem Bridge, Morrisania and Fordham Railway Company, at Fordham, extending west over and across the bridge of the New York and Harlem railroad to Kingsbridge road; thence through and along said road to its intersection with the High Bridge road; thence through and along said High Bridge road to its intersection with Sedgwick avenue; thence northerly along said avenue to its intersection with Bailey avenue; thence along Bailey avenue to its intersection with Broadway at Kingsbridge.

Beginning on Sedgwick avenue at its intersection with Jerome avenue and extending in a northerly direction through and along said avenue to the city line. Together with the necessary connections, switches, turnouts, turntables, and suitable stands for the convenient working of said road, its extension and branches.

And your petitioner further shows that pursuant to the law of this State, it is necessary that your petitioner obtain the consent of the common council of the city of New York to enable your petitioner to construct, extend, maintain and operate and use the railroad for whose construction, extension maintenance and operation according to law your petitioner now applies to your honorable body for its consent.

The railroad proposed to be constructed, extended, maintained and operated by your petitioner as hereinbefore set forth is intended to be operated by any motive power other than locomotive steam power which now or at any time hereafter may lawfully be used and employed on its route. Your petitioner, therefore, prays and hereby makes application to the common council of the city of New York for its consent and permission to be granted to your petitioner, its successor, successors, lessees and assigns, to construct, extend, maintain and operate a street surface railroad for the public use in the conveyance of persons and property through, upon and along the surface of the streets, avenues and highways as above set forth and described, together with all necessary connections, switches, sidings, turnouts, turntables and suitable stands for the convenient working of said road, and for the accommodation of the company's cars, which should be run over the said railroad by your petitioner, its successors, lessees or assigns.

And your petitioner will ever pray, etc.

Dated New York July 5, 1892.

UNION RAILWAY COMPANY OF NEW YORK CITY,

EDWARD A. MAHER,

President.

CONSENT OF LOCAL AUTHORITIES.

First Extension.

Resolved, That the consent of the common council of the city of New York be, and it hereby is, given to the said Union Railway Company of New York city, to the extension, construction, maintenance and operation upon the conditions hereinafter set forth, of extensions or branches of their road upon and along the surface of the following streets, avenues and highways of the city of New York, that is to say:

Beginning at McComb's Dam bridge on Jerome avenue and extending through and along said avenue to city line.

Beginning on Morris avenue at its intersection with Third avenue and extending north through and along said Morris avenue to Fordham Landing (or High Bridge road).

Beginning at the Harlem river on Willis avenue and extending north through and along said Willis avenue to its intersection with Melrose avenue; thence through and along Melrose avenue to its intersection with Webster avenue; thence through and along said Webster avenue to its intersection with the Bronx River road; thence through and along said road to the city line.

Beginning at the city line at the Bronx river on Tremont avenue, and extending west through and along said Tremont avenue to its intersection with Webster avenue and Burnside avenue; thence through and along said Burnside avenue to its intersection with Sedgwick avenue and Cedar avenue; thence through and along Cedar avenue to its intersection with Riverview terrace; thence southerly through and along said Riverview terrace to its intersection with Sedgwick avenue, also west through and along Dock street from its intersection with Riverview terrace to the tracks of New York and Northern Railway Company.

Beginning at the intersection of Olin avenue with Webster avenue and extending east through and along said Olin avenue to the city line.

Beginning at Washington bridge, on Boscobel avenue, and extending east through and along said avenue to its intersection with Jerome avenue.

Beginning at the terminus of the tracks of the Harlem Bridge, Morrisania and Fordham Railway Company, at Fordham, extending west over and across the bridge of the New York and Harlem railroad to Kingsbridge road; thence through and along said High Bridge road to its intersection with Sedgwick avenue; thence northerly along said avenue to its intersection with Bailey avenue; thence along Bailey avenue to its intersection with Broadway at Kingsbridge.

Beginning at Sedgwick avenue at its intersection with Jerome avenue and extending in a northerly direction through and along said avenue to the city line, together with such switches, sidings, turnouts, turntables and suitable stands as may be necessary for the convenient operation of said extensions or branches.

Further resolved, That the conditions upon which the said consent is hereby given are as follows, to wit:

First. That the provisions of chapter 565 of the Laws of 1890, and the amendments thereof, in so far as the same are not incon-

sistent with the provisions of chapter 340 of the Laws of 1892, shall be complied with.

Second. That the president and treasurer of the said Union Railway Company of New York city shall annually make a verified statement to the comptroller of the city of New York, on or before the first day of September in each year, of the gross amount of its receipts for the year ending June 30th next preceding, and also a detailed account of its daily earnings during that period, and the books of said company shall be open to inspection and examination by said comptroller or his duly appointed agent, for the purpose of ascertaining the correctness of its report as to its gross earnings and may take proofs in relation thereto. Whenever such earnings shall, during any period of six months, exceed an average of \$1,700 per day, then and in that event the said company shall thereafter annually, on the 1st day of December, pay into the treasury of the city of New York, to the credit of the sinking fund of said city, a sum equaling in the aggregate one per cent. of gross earnings and an additional payment of 1 per cent. of gross earnings shall be made by said company in like manner for each multiple of \$1,700 per day of such average gross earnings. gross receipts for all of the lines of road owned by said company, whether operated by said company or by lessee thereof, or any portion thereof, shall be deemed gross earnings of said company within the meaning of this section. The payment of the percentage of gross receipts herein provided for shall be in lieu of all other percentages which any of the roads consolidating and forming the said Union Railway Company of New York city, may, therefore, be liable to pay on its receipts.

Third. In the construction of said extension or branches, the equipment, material and work employed shall be the best quality and character and the cars thereon shall be run as often as the convenience of the public may require.

Fourth. That the said railway company and any person or corporation using the track, or any part of the track, constructed or laid out under or pursuant to the consent, shall comply with all reasonable ordinances or regulations which local authorities have in charge of the aforesaid extensions or branches shall make as to the rate of speed and removal of ice and snow, and shall not charge any passenger more than 5 cents from or to any point on the branches or extension hereinbefore described, within the present limits of New York, nor from or to any point on said route or routes operated by said company or under its control and connecting with the route herein above described, to or from any point on said route, or any route, extension or branch operated by said company or under its control, and connecting with the route hereinbefore described within the present limits of the city of New York.

Fifth. That the cars to be used on such branches or extensions to the construction of which this consent is given, may be operated by any motive power other than locomotive steam power.

Adopted by the board of aldermen, August 23, 1892. Approved by mayor, August 26, 1892.

MICHAEL F. BLAKE,

[L. S.]

Clerk of the Common Council.

(Filed in office of Clerk of New York county, January 17, 1893.)

ACCEPTANCE OF CONSENT OF LOCAL AUTHORITIES.

First Extension.

Know all men by these presents that, Whereas, on the 12th day of July, 1892, application was duly made by the Union Railway Company of New York city to the common council of the city of New York for its consent to extend, construct, maintain and operate certain branches and extensions of its line of railway upon certain streets, avenues and highways in said city; and

Whereas, The said common council, by resolution duly passed on the 23d day of August, 1892, gave its consent to the said Union Railway Company of New York city to construct, operate and maintain such branches and extensions, which resolution was on the 26th day of August, 1892, duly approved and signed by the mayor of the city of New York.

Now, therefore, the Union Railway Company of New York city, by these presents, does hereby accept in all respects the said consent of the municipal authorities of the city of New York to the construction, operation and maintenance of said branches and extensions, and the conditions upon which the said consent was granted.

UNION RAILWAY COMPANY OF NEW YORK CITY.

[L. S.]

By EDWARD A. MAHER,

President.

Dated New York city, August 31, 1892.

STATE OF NEW YORK,
CITY AND COUNTY OF NEW YORK,

Be it remembered that on the 31st day of August, 1892, at said city of New York, before me, Daniel F. Cohalan, a duly authorized notary public for the city, county and State aforesaid, came Edward A. Maher, with whom I am personally acquainted, and known to me to be the president of the Union Railway Company of New York city, the corporation described in and which executed the above instrument, who, being by me duly sworn, did depose and say that he resides in the city and county and State of New York; that he is the president of the Union Railway Company of New York city; that he knows the corporate seal of said company; that the seal affixed to the foregoing instrument in such corporate seal, and was so affixed by the order of the board of directors of said company, and acknowledged to be the act and deed of said company for the uses and purposes therein set forth.

In witness whereof, I have hereunto set my hand and affixed my official seal the day and year above written.

DANIEL F. COHALAN,

Notary Public (175), City and County of New York. (Ordered filed by common council, September 14, 1892.)

STATEMENT OF PROPOSED EXTENSION.

Second Extension.

The Union Railway Company of New York city proposes to construct, maintain, operate and extend a street surface railroad, for use in conveying persons and property in the city of New York,

and that the said railroad is proposed to be constructed, extended, maintained and operated upon and along the surface of the following streets, avenues and highways in the city of New York, that is to say:

Through and along Exterior avenue as the same now is or may hereafter be laid out, from its junction with Third avenue to its junction at Eighth avenue.

From the southern terminus of the Madison avenue bridge through and along Madison avenue to One Hundred and Thirteenth street.

Through and along One Hundred and Thirty-fifth street in a westerly direction from its junction with Madison avenue to Eighth avenue.

Also along the bridge across the Harlem river, from Third avenue to Second avenue, and also along Second avenue to One Hundred and Twenty-fifth street.

Through and along One Hundred and Twenty-fifth street in a westerly direction to Fourth avenue.

Through and along Fourth avenue from One Hundred and Twenty-fifth street to One Hundred and Thirtieth street.

Also through and along One Hundred and Thirteenth street from Fourth avenue to Madison avenue.

From the easterly terminal of what is now known as Washington bridge through and along Boscobel avenue to Jerome avenue.

Through and along Broadway in a northerly direction from its intersection with Kingsbridge road to the northerly city line.

Dated New York, December 4, 1892.

UNION RAILWAY COMPANY OF NEW YORK CITY,

[L. S.]

By Edward A. Maher,

President.

STATE OF NEW YORK,
CITY AND COUNTY OF NEW YORK,

Be it remembered, that on this 4th day of December, 1892, at the city of New York, before me personally came Edward A. Maher, president of the Union Railway Company of New York No. 98.] '1485

city, with whom I am personally acquainted, who being by me duly sworn, says that he resides at the city of New York; that he is president of the Union Railway Company of New York city; that he knows the corporate seal of said company, and that he signed his name thereto by the like authority and acknowledged the same to be the act and deed of the said Union Railway Company of New York city, for the uses and purposes therein mentioned.

In witness whereof, I have hereunto set my hand and affixed my official seal the day and year first above written.

[L. S.]

THOMAS A. MAHER,

Notary Public, New York City and County.

(Filed with Secretary of State, December 29, 1893.)

PETITION TO COMMON COUNCIL.

Second Extension.

To the Honorable the Common Council of the City of New York:

The Union Railway Company, of New York city, herewith makes and files this application to said authorities to be allowed to build the branches and extend the lines of the railway hereafter fully described.

Said Union Railway Company, of New York city, says that it is a street surface railway company, organized and existing under and by virtue of the laws of the State of New York, under which it is authorized to build, maintain and operate street surface railways on the following streets:

Commencing at or near One Hundred and Thirteenth street, on Third avenue, along said avenue to and across the Harlem bridge; commencing at or near the termination of the Harlem or Coles bridge, on the Westchester side of the Boston road, and running along said route to a point where the said road intersects with Fordham avenue; and thence along said Fordham avenue, with necessary turnouts, to the Kingsbridge road; thence along the same to the Harlem Railroad at or near its depot at Fordham.

Along One Hundred and Thirty-eighth street, in the town of Morrisania, to Port Morris, and along William street, Grove street, Butternut street, Cedar street and River avenue, in said town of Morrisania, and across Cromwell's creek, to the village of Highbridgeville.

And along the Boston post road to the village of West Farms and the village of Westchester, in the town of Westchester, through Lincoln avenue and One Hundred and Thirty-third street, or through both of said streets and avenues in the town of Morrisania.

Along Westchester avenue, or southern Westchester turnpike, from its junction with Third avenue or Boston road, in the town of Morrisania, through the towns of West Farms and Westchester to Westchester village, and through and along Morris street and Locust avenue, in the town of West Farms, from the Harlem Railroad to West Farms village.

Through and along St. Ann's avenue to its southern terminus, and through and along Van Stoll street, otherwise known as One Hundred and Thirty-eighth street, from Third avenue to the Harlem river, and also through and along College avenue, from Kingsbridge road to its intersection with the road known as Fordham and Pelham avenue, and through and along the last-named avenue to Pelham bridge, in the town of Westchester, and also from the present terminus of the tracks of said corporation, at or near Locust avenue, in the late town of West Farms, through and along the main road leading in an easterly direction to the point where the said main road intersects with the Westchester turnpike in the town of Westchester.

From its tracks on Third avenue, through and along Morris avenue, with double tracks to East Railroad avenue; thence northerly through, upon and along East Railroad avenue, with double tracks, to One Hundred and Fifty-fifth street; thence westerly through, upon and along East One Hundred and Fifty-sixth street, and across the tracks of the New York and Harlem Railroad Company, with double tracks, to West Railroad avenue; thence northerly through, upon and along Morris avenue, with double tracks, to East One Hundred and Sixty-first street.

Commencing at East One Hundred and Forty-ninth street and

Morris avenue, running thence easterly, with single tracks, to Cortlandt avenue; thence running northerly through, upon and along Cortlandt avenue, with double tracks, to East One Hundred and Sixty-first street.

Also, from the tracks on Morris avenue and East One Hundred and Forty-eighth street; running thence easterly through, upon and along East One Hundred and Forty-eighth street, with single tracks, to Cortlandt avenue; thence through, upon and along Cortlandt avenue, with double tracks, to connect with the tracks of East One Hundred and Forty-ninth street; thence southerly upon and along Cortlandt avenue, with double tracks, to the intersection of Cortlandt avenue and North Third avenue.

Also, beginning at North Third avenue at or near East One Hundred and Thirty-eighth street, running thence westerly through, upon and along East One Hundred and Thirty-eighth street, with double tracks, to Mott avenue; thence northerly through, upon and along Mott avenue, with double tracks, to East One Hundred and Sixty-fifth street; thence easterly through, upon and along East One Hundred and Sixty-fifth street, with double tracks, to the entrance of Fleetwood Park; also, beginning at the intersection of Mott avenue with East One Hundred and Sixty-first street; thence running easterly through, upon and along East One Hundred and Sixty-first street, with double tracks, to the intersection of said street with North Third avenue, and to the tracks of the Harlem Bridge, Morrisania and Fordham Railway Company.

Through and along East Railroad avenue, with double tracks, to East One Hundred and Fifty-eighth street; thence westerly through, upon and along East One Hundred and Fifty-eighth street and across the tracks of the New York and Harlem Railroad Company and West Railroad avenue, with double tracks, to Morris avenue.

Through and along Morris avenue to its junction with One Hundred and Sixty-fifth street.

Beginning at McComb's Dam bridge, on Jerome avenue, and extending through and along said avenue to the city line.

Beginning on Morris avenue, at its intersection with Third avenue, and extending north through and along said Morris avenue to Fordham landing (or High Bridge road).

Beginning at Harlem river, on Willis avenue, and extending north through and along said Willis avenue to its intersection with Melrose avenue, to its intersection with Webster avenue; thence through and along said Webster avenue to its intersection with the Bronx river road; thence through and along said road to the city line.

Beginning at the city line, at the Bronx river, on Tremont avenue, and extending west through and along said Tremont avenue to its intersection with Webster avenue and Burnside avenue; thence through and along said Burnside avenue to its intersection with Sedgwick avenue and Cedar avenue; thence through and along Cedar avenue to its intersection with Riverview terrace; thence southerly through and along said Riverview terrace to its intersection with Sedgwick avenue; also west through and along Dock street from its intersection with Riverview terrace to the tracks of the New York and Northern Railroad Company.

Beginning at the intersection of Olin avenue with Webster avenue and extending east through and along said Olin avenue to the city line.

Beginning at Washington bridge, on Boscobel avenue, and extending east through and along said avenue to its intersection with Jerome avenue.

Beginning at the terminus of the tracks of the Harlem Bridge, Morrisania and Fordham Railroad Company, at Fordham, extending west over and across the bridge of the New York and Harlem Railroad to Kingsbridge road; thence through and along said road to its intersection with High Bridge road; thence through and along said High Bridge road to its intersection with Sedgwick avenue; thence northerly along said avenue to the intersection with Bailey avenue; thence along Bailey avenue to its intersection with Broadway at Kingsbridge.

Beginning on Sedgwick avenue, at its intersection with Jerome avenue, and extending in a northerly direction through and along said avenue to the city line.

Together with the necessary connections, switches, turnouts, turntables and suitable stands for the convenient working of the said roads, their extensions and branches.

Said corporation has constructed and is now operating the following line of railway:

Commencing at or near One Hundred and Thirtieth street, on Third avenue, thence through and along said avenue to and across the Harlem or Coles bridge; thence along Third avenue, formerly known as the Boston road, to its intersection with Fordham avenue; thence along said Fordham avenue, with necessary turnouts to Kingsbridge road; thence along the same to the Harlem road at or near its depot at Fordham.

Along One Hundred and Thirty-eighth street, in the town of Morrisania, to Port Morris.

Through and along Lincoln avenue, from its intersection with Third avenue, in a southerly direction, to One Hundred and Thirty-third street; through and along One Hundred and Thirty-third street in an easterly direction to its intersection with Lincoln avenue; along Westchester avenue or southern Westchester turnpike, from its junction with Third avenue or Boston road to the Bronx river; along the Boston road, from its intersection with Third avenue, to the Bronx river at the village of West Farms.

Through and along One Hundred and Thirty-eighth street, formerly known as Van Stoll street, to the Harlem river; thence across the Madison avenue bridge to the northerly terminus of Madison avenue.

Also a single track line, commencing on the Boston road at the Bronx river; thence extending easterly along said road 600 feet; also 300 feet of further track at this point partially completed.

That the Union Railway Company of New York city, as aforesaid, desires to give its patrons, customers and the public, continuous transportation over its lines as now existing and of the others hereinafter described and applied for.

That it would be of great public convenience if it be allowed to furnish such transportation over a continuous line for one fare to those desiring to pass over such lines, and that, if this application be granted, such rights will be accorded to the public.

That the Union Railway Company of New York city desires to construct, extend and establish the following extension and branches:

Through and along Exterior avenue, as the same now is or may hereafter be laid out, from its junction with Third avenue to its junction at Eighth avenue.

From the southern terminus of the Madison avenue bridge, through and along Madison avenue to One Hundred and Thirtieth street.

Through and along One Hundred and Thirty-fifth street in a westerly direction, from its junction with Madison avenue to Eighth avenue.

Also along the bridge across the Harlem river, from Third avenue to Second avenue, and along Second avenue to One Hundred and Twenty-fifth street.

Through and along One Hundred and Twenty-fifth street in a westerly direction to Fourth avenue.

Through and along One Hundred and Twenty-fifth street in a westerly direction to Fourth avenue.

Through and along Fourth avenue, from One Hundred and Twenty-fifth street, to One Hundred and Thirtieth street.

Also through and along One Hundred and Thirtieth street from Fourth avenue to Madison avenue.

From the easterly terminal of what is now known as Washington bridge, through and along Boscobel avenue to Jerome avenue.

Through and along Broadway in a northerly direction from its intersection with Kingsbridge road, to the northerly city line.

Your petitioner alleges that said branches and extensions can not be operated as independent railroads without inconvenience to the public, but that it is to the public advantage that the same should be operated as a continuous line or route with the said railroad now existing.

And your petitioner further shows that pursuant to the law of this State, it is necessary that your petitioner obtain the consent of the common council of the city of New York to enable your petitioner to construct, extend, maintain and operate and use the said road, for whose construction, extension, maintenance and operation, according to law, your petitioner now applies to your honorable body for its consent.

The extension and branches to be constructed, extended maintained and operated by your petitioner as hereinbefore set forth are intended to be operated by any motive power other than locomotive steam power, which now or at any time hereafter may law; fully be used and employed on its route.

Your petitioner, therefore, prays and hereby makes application to the common council of the city of New York, for its consent and permission to be granted to your petitioner, its successor, successors, lessees and assigns, to construct, extend, maintain and operate a street surface railroad for public use in the conveyance of persons and property to, upon and along the surface of the streets, avenues and highways as above set forth and described, together with all necessary connections, switches, sidings, turnouts, turntable and suitable stands for the convenient working of said road, and for the accommodation of the company's cars, which should be run over the said road by your petitioner, its successor, lessees or assigns.

Wherefore, it most respectfully prays that this application be granted, and that the public and local authorities consent thereto.

Dated New York, December 5, 1892.

UNION RAILWAY COMPANY OF NEW YORK CITY,

By EDWARD A. MAHER,

President.

CONSENT OF LOCAL AUTHORITIES.

Second Extension.

Whereas, On the 6th of December, 1892, an application in writing was made to the common council of the city of New York by the Union Railway Company of New York city for the consent to the extension, construction, maintenance and operation of

branches and extension of its present railroad upon and along the surface of the streets, avenues, and highways of said city, designated in the application of said company as the route or routes of said extensions and branches;

Whereas, The said common council caused public notice of such application and of the time and place where the same would be first considered to be given by publication for at least 14 days in two daily newspapers in New York city, which papers were designated for the purpose by the mayor of said city.

Whereas, The said common council caused public notice of such application and of the time and place where the same would be first considered to be given by publication for at least 14 days in two daily newspapers in New York city, which papers were designated for the purpose by the mayor of said city;

Whereas, After public notice given as aforesaid and a public hearing in pursuance thereof duly had, whereat all persons so desiring were given an opportunity to be heard and were heard, such appplication has been duly considered by the same common council;

Resolved, That the consent of the common council of the city of New York be and it is hereby is given to the said Union Railway Company of New York city to the extension, construction, maintenance and operation upon the conditions hereinafter set forth, of extensions or branches of their railroad upon and along the surface of the following streets, avenues and highways of the city of New York.

Through and along Exterior avenue as the same now is or may hereafter be laid out, from its junction with Third avenue to its junction at Eighth avenue.

From the southern terminus of the Madison avenue bridge through and along Madison avenue to One Hundred and Thirtieth street.

Through and along One Hundred and Thirty-fifth street, in a westerly direction, from its junction with Madison avenue to Eighth avenue.

Also, along the bridge along the Harlem river, from Third

avenue to Second avenue and along Second avenue to One Hundred and Twenty-fifth street.

Through and along One Hundred and Twenty-fifth street in a westerly direction to Fourth avenue, through and along Fourth avenue from One Hundred and Twenty-fifth street to One Hundred and Thirtieth street.

Also through and along One Hundred and Thirtieth street from Fourth avenue to Madison avenue.

From the eastern terminal of what is now known as Washington bridge, through and along Boscobel avenue to Jerome avenue.

Through and along Broadway in a northerly direction from its intersection with Kingsbridge road to the northerly city line.

Further resolved, That the conditions upon which the said consent is hereby given are as follows:

First. That the provisions of chapter 565 of the Laws of 1890, and the amendments thereof, in so far as the same are not inconsistent with the provisions of chapter 340 of the Laws of 1892, shall be complied with.

Second. That the president and treasurer of the said Union Railway Company of New York city shall annually make a verified statement to the comptroller of the city of New York on or before the 1st day of September, in each year, of the gross amount of its receipts for the year ending June 30th, next preceding and also a detailed account of its daily earning during that period, and the books of said company shall be open to inspection and examination by said comptroller or his duly appointed agent, for the purpose of ascertaining the correctness of its report as to its gross earnings and may take proofs in relation thereof. Whenever such earnings shall, during any period of six months, exceed an average of \$1,700 per day, then in that event the said company shall thereafter annually on the 1st day of December, pay into the treasury of the city of New York to the credit of the sinking fund of said city a sum equalling in the aggregate 1 per cent. of gross' earning and an additional payment of 1 percent. of such gross earning shall be made by said company in like manner for each multiple of \$1,700 per day of such average gross earnings.

receipts of all the lines of road owned by the said company, whether operated by said company or by lessees thereof or any portion thereof, shall be deemed gross earning of said company within the meaning of this section. The payment of the percentage of gross receipts herein provided for shall be in lieu of all other percentages which any of the roads consolidating and forming the said Union Railway Company of New York city may, therefore, be liable to pay on its receipts.

Third. In the construction of said extensions or branches, the equipment, material and work employed shall be of the best quality and character, and the cars thereon shall be run as often as the convenience of the public may require.

Fourth. That the said railway company and any person or corporation using the track or any part of the tracks extended, constructed or laid out under or pursuant to the consent, shall comply with all reasonable ordinances or regulations which the local authorities having charge of the aforesaid extensions or branches shall make as to the rate of speed and removal of ice and snow, and shall not charge any passenger more than five cents from or to any point on the branches or extension hereinbefore described, within the present limits of the city of New York, nor from or to any point on said route or routes operated by said company or under its control and connecting with the route hereinabove described, to or from any point on said route, or any route, extension or branch operated by said company or under its control and connecting with the route hereinabove described within the present limits of the city of New York.

Fifth. That the cars to be used on such branches or extensions to the construction of which this consent is given may be operated by any motive power other than locomotive steam power.

Adopted by the board of aldermen December 27, 1892.

Approved by the mayor December 28, 1892.

(Filed in office of clerk of New York county January 17, 1893.)

ACCEPTANCE OF CONSENT OF LOCAL AUTHORITIES.

Second Extension.

Know all men by these presents that, Whereas on the 6th day of December, 1892, application was duly made by the Union Railway Company of New York city to the common council of the city of New York for its consent to extend, construct, maintain and operate certain branches and extensions of its line of railway on certain streets, avenues and highways in said city;

And whereas, The said common council, by resolution duly adopted on the 27th day of December, 1892, gave its consent to the said Union Railway Company of New York city to construct, operate and maintain such branches and extensions, which resolution was on the 28th day of December, 1892, duly approved and signed by the mayor of the city of New York;

Now, therefore, the said Union Railway Company of New York city, by these presents, does hereby accept, in all respects, the said condition of the said local authorities of the city of New York, to the construction, operation and maintenance of said branches and extensions and the conditions upon which the said consent was granted.

In witness whereof, the said company has caused these presents to be signed by its president, and its corporate seal to be hereunto affixed this 28th day of February, 1893.

THE UNION RAILWAY COMPANY OF NEW YORK CITY.

[L. S.]

By EDWARD A. MAHER,

President.

STATE OF NEW YORK, CITY AND COUNTY OF NEW YORK, 88.:

Be it remembered, that on this 20th day of February, 1893, at said city of New York, before me, George W. Vultee, a duly authorized notary public for the city, county and State aforesaid, came Edward A. Maher, with whom I am personally acquainted, known to me to be the president of the Union Railway Company of New York city, the corporation described in and which executed the above instrument, who, being duly sworn, did depose and say,

that he resides in the city and county of New York, and State of New York; that he is the president of the Union Railway Company of New York city; that he knows the corporate seal of said company; that the seal affixed to the foregoing instrument is such corporate seal, and was so affixed by order of the board of directors of said company, and that he signed his name thereto by the like order as president of said company, and acknowledged the same to be the act and deed of said company for the uses and purposes therein set forth.

In witness whereof, I have hereunto set my hand and affixed my official seal the day and year above written.

[L. S]

GEORGE W. VULTEE,

Notary Public, City and County of New York.

(Ordered filed by common council February 28, 1893.)

PERMISSION OF BOARD OF RAILWAY COMMISSIONERS TO CHANGE MOTIVE POWER.

BOARD OF RAILROAD COMMISSIONERS OF THE STATE OF NEW YORK.

ALBANY, March 17, 1891.

Present.—Commissioners William E. Rodgers, Isaac V. Baker, Jr., Michael Rickard.

In the Matter of Application of The Harlem Bridge, Morrisania and Fordham Railway Company for the approval of the board of a change of motive power from horses to the overroad single electric railway system, in accordance with chapter 531 of the Laws of 1889.

The first application in that matter, dated January the 7th, 1891, was duly lodged with the board. Not being sufficiently specific as to the form of power desired to be approved nor as to the routes upon which it was to be applied, an amended application was subsequently filed, dated January the 21st, 1861, setting forth the routes in detail and applying for approval of the single trolley electric system.

After extended notice in the press, a public hearing was had at the Chamber of Commerce, New York city, on February the 4th, No. 98.] 1497

1891, the railroad company was represented by Augustus Hutchins and John S. Wise, of counsel; Henry Spratley, president; William Cauldwell and others. Contesting property owners on Third avenue were represented by Arthur C. Butts; on Boston avenue by C. S. Simpson. Ernest Hall, representing property owners on Boston, avenue in favor of the change. Several other parties appeared expressing views on the subject.

The board was informed that a temporary injunction had been served upon the railroad company at the instance of Third avenue property holders, restraining the company from presenting their consent to the board upon the claim of the contestants, among other things, that such consents had been obtained by fraud. For this reason the hearing was principally taken up in discussion of the general merits of the trolley system as applicable to that portion of New York city in which it was proposed to apply it.

It appeared, among other things, that the board of electrical control of the city, consisting of Hon. Hugh J. Grant, mayor, Mr. Jacob Hess, Mr. Theodore Moss, had given its consent to the erection of necessary poles upon which to string the wires of the company after a careful investigation of the merits of this system of propulsion, and a personal examination by Mr. Grant of the system in operation in Boston.

Subsequent to this hearing notice was received from the rail-road company that it had secured a majority of consents upon Third avenue without regard to those of the property holders who had procured the injunction. A second hearing was then had on February the 20th, after due notice, at which time the company claimed to have procured a large majority of consents upon the line of all the routes, with the exception only of Boston avenue, from One Hundred and Sixty-fourth street to West Farms. It also appeared at this hearing that the injunction as to the presentation of Third avenue consents had been dissolved by Justice Ingraham, the justice holding that no evidence of fraud whatever had been adduced to sustain the charge.

The question arose at this hearing as to the right of abutting property holders to withdraw their consents after having given

them. The board sustained the contestants in the claim that the property holders had such right to withdraw, for the same reasons given in the application of the Buffalo Street Railway Company (R. R. Com. R., 1890, 1st vol. pp. 110-112). The reasons are based upon the opinion of the Court of Appeals in the case of People v. Sawyer, county judge (52 N. Y., p. 296), the court's language in brief is as follows:

"A taxpayer who has signed a petition for bonding his town under the provisions of the act permitting municipal corporations to aid in the construction of railroads, has the right to withdraw his name therefrom at any time prior to the final submission of the case to the county judge, and upon such withdrawals his name and taxable property must be excluded from the calculation upon the part of the applicants."

The case is not altogether similar, but the principles enunciated in the discussion thereof by the learned judge (Grover, J.) seems to the board applicable to this.

Mr. Butts, on behalf of the contestants on Third avenue, disputed the sufficiency of the consents and requested time within which to examine them and file objections as to their validity and sufficiency. The request was granted and an opportunity was given Mr. Butts and other contestants to examine the consents on file in the office of the county clerk. A brief dated February 26, was submitted by him, making specific objections to a large number of consents, and raising the point, among others, that the value of the abutting property had been taken from the assessment-roll of 1891 instead of 1890; that in this way the assessed value of the property consenting had been materially increased, and that the law, as applicable to this case, required that the value should be taken from the assessment-roll of 1890.

A copy of the brief was submitted to the railroad company and another hearing set down, after due notice to all parties concerned, at the Chamber of Commerce, New York city, Wednesday, March 11, 1891. At this latter hearing the railroad and contestants were represented as before. The railroad company, on its behalf, submitted an affidavit of Henry Bracken, a deputy tax com-

missioner of the city and county of New York, which is herewith given:

Henry Bracken, being duly sworn, says that he resides in the city of New York, and that he is employed as deputy tax commissioner of the city and county of New York, and has been so employed for the past fourteen years; that he has been requested to examine the assessment rolls on file in the office of the commissioners of taxes and assessments for the year 1890, for the purpose of certifying to the value of property abutting on the various streets and avenues through which the Harlem Bridge, Morrisania and Fordham Railway Company have constructed and operated its railroad and also to compare the consents of the property owners which the company has obtained to its proposed change of motive power, with the assessment rolls in said office for the year 1890, that he has made such examination, and finds as follows, viz.:

Assessed value of property on Third avenue from One	
Hundred and Twentieth street to Pelham avenue,	
Fordham, is	\$4,611,875
Same as to property on Westchester avenue from	
Third avenue to Bronx river is	388,400
Same as to Boston avenue from third avenue to Tre-	
mont avenue and along Tremont avenue to Bronx	
river is	720,210
Same as to Lincoln avenue from One Hundred and	
Thirty-third street to One Hundred and Thirty-	
eighth street is'	756,000
Same as to One Hundred and Thirty-eighth street	
from Madison avenue bridge to Long Island Sound	
is	1,127,650
Same as to One Hundred and Thirty-third street	
from Third avenue to Lincoln avenue	141,000
Making a total valuation of	\$7,265,135

[&]quot;That the assessed valuation of the property abutting on the same streets and avenues in front of which said company has con-

structed and operate its railway, the owners consented, deducting all alleged withdrawals of such consents filed with the company to date, and adding all reconsents obtained by the company, based on valuation as they appear on the assessment rolls for the year 1890, on file in said office is:

On Third avenue	\$2,768,550
On Westchester avenue	$379,\!650$
On Boston avenue and Tremont avenue	345,950
On Lincoln avenue	216,000
On One Hundred and Thirty-eighth street	909,100
On One Hundred and Thirty-third street	116,000
Making a total valuation of	\$4,735,520

"Deponent further says that he has been requested to make a recapitulation or the total assessed valuation of property on each street, the required majority of such total valuations and the amount of consents on the same streets in tabular form for easy reference, which he has done and finds to be as follows:

	Total valuation.	Required majority.	Net consents.
Third avenue	\$4,611,875	\$2,305,938	\$2,768,550
Westchester avenue	388,400	194,201	$379,\!650$
Boston and Tremont avenue	$720,\!210$	360,106	$345,\!950$
Lincoln avenue	276,000	138,001	216,000
One Hundred and Thirty-			
eighth street	1,127,650	$563,\!626$	909,100
One Hundred and Thirty-			
third street	141,000	70,501	116,000
•	\$7,265,135	\$3,632,573	\$4,735,250
=			

(Signed.)

HENRY BRACKEN,

Sworn to before me this 10th day of March, 1891.

(Signed.)

E. T. TAGGARD,

Commissioner of Deeds."

It will be seen from the above that, treating the system as a whole, there is an excess of \$1,102,677 of consents of abutting property holders over a majority.

No ojections were raised as to the sufficiency of the consents on any of the routes except the Third avenue route and the Boston avenue route.

First.— As to the Third avenue route.

Bracken's affidavit states that the total assessed value of property abutting the Third avenue route is \$4,611,875; that the company's net consents to the 10th of March were \$2,768,550; consents necessary to the change, \$2,305,938; excess over and above majority, \$462,612.

Mr. Butts, in his brief, contests the sufficiency or validity of the consents in a great many particulars. His objections were taken up seriatim at the hearing. The board finds, however, that giving Mr. Butts the benefit of every contested point there would still be an excess over the amount required of \$577,000. The board, therefore, did not deem it necessary or desirable to take further testimony than that presented at the last hearing, for the reason that many of the points raised by Mr. Butts, the board would of necessity be compelled to decide against him upon their merits, even if his contention were not disposed of by the opinion of the Attorney-general in regard to the Boston avenue question, hereinafter quoted. There was nothing to show that fraud had been exercised by the company, or that there was any likelihood of Bracken's figures being found inaccurate to the extent of showing that the company had not a clear majority of the consents.

Second.— As to the Boston avenue and Tremont avenue.

Bracken's affidavit states that the total assessed	
value of property on the Boston avenue route is	
\$720,210; and that the companies net consents to	
the 10th day of March were	\$345,950
Consents necessary to the change	360,106
The company lacking necessary to a majority	\$14,150

At the hearing further consents were submitted to the amount of \$13,300, and withdrawals to the amount of \$4,800. This apparently leaves the company \$5,650 short of a majority of consents on Boston avenue. It is proper to say that inasmuch as the company admitted to the lack of a majority on Boston avenue the question of the sufficiency of the consents as claimed by Mr. Simpson was not gone into, but the case, by consent of all parties, rested where it was.

The important question is now raised, whether the company, having secured a majority in value of the consents of the property holders upon the whole system of its road, has conformed to the statute in regard to such consents. There was an elaborate argument pro and con. on this subject. There being so much difference of opinion the board submitted the matter to the Attorney-General in the following letter:

Hon. Charles F. Tabor, Attorney-General State of New York:

DEAR SIR.—In the matter of the application of the Harlem Bridge, Morrisania and Fordham Railway Company for the approval of the Board of a change of motive power from horse to the overhead single trolley electric railway system, a question has arisen as to the true interpretation of chapter 531 of the Laws of 1889, which the board desires to sumbit to you for an opinion thereon.

"Chapter 252 of the Laws of 1884, known as the General Street Railway Act, provides in section three in accordance with the words of the Constitution that the company may construct such road," provided that the consent is in writing of the owners of one-half in value of the property bounded on and the consent also, of the local authorities having control of that portion of the street or highway upon which it is proposed to construct or operate such railroad, be after the passage of this act be first obtained:

- " \S 12 of the act originally read as follows:
- "§ 12. Any street surface railway company may in any case operate any portion of its road by animal or horse power, or by any power other than locomotive steam power which may be consented to by the local authorities and by a majority of the

property owners, obtained in accordance with sections 3 and 4 of this act."

"It was amended by chapter 531 of the Laws of 1889, substituting the board of Railroad Commissioners for the local authorities as a public body to give consent to the change of motive power, and also alternating the language as to the consents of abutting property holders. Section 12 now reads as follows:

"§ 12. Any street surface railway company may, in any case, operate any portion of its railroad by cable or electricity, or by any power other than locomotive steam power, instead of by animal or horse power, which may be approved by the State Board of Railroad Commissioners, and consented to by the owners of one-half in value of the property bounded on that portion of the railroad as to which a change of motive power is proposed; and in case the consent of the property owners can not be obtained, then the determination of three disinterested commissioners, appointed by the General Term of the Supreme Court in the department in which said railroad is located, in favor of such motive power, confirmed by said court, shall be taken in lieu of the consent of said property The provisions of Section 3, 4, 5 and 6 of the act hereby amended shall apply so far as applicable to such consents of said property owners and to the proceedings for the appointment and determination of said commissioners and the confirmation of said determination. It shall be lawful for any such railroad company to make any changes in the construction of its road or roadbed at any time rendered necessary by a change in its motive power."

"It will be observed that the section now provides that the consent to a change must be approved by the owners of one-half in value of the property bounded on that portion of the railway as to which a change of motive power is proposed,' instead of the consents upon that portion of a street or highway upon which it is proposed to change."

"In the case of the application under consideration the railroad company operates a system of railroad beginning in Third avenue at about One Hundred and Twenty-ninth street in the city of New York, crossing the Harlem river, running up third avenue to Fordham and having branches at One Hundred and Thirty-third street, One Hundred and Thirty-eighth street, Westchester avenue and Boston avenue.

"The original charter of the company was given by chapter 316 of the Laws of 1863, by which act certain parties therein named, framed into a corporation were vested with the exclusive right to lay double track on the centre of Boston Post road, and to use or operate the same, commencing at or near the termination of the Harlem river or Cole's bridge (that is, on the north line of the Harlem river), and running along the said route to a point where the said road intersects with Fordham avenue, and thence along said Fordham avenue by a single or double track with necessary branches to the Kingsbridge road, at or near its depot at Fordham. Section 9 of the said act provided that the corporations formed should be authorized to lay tracks at the termination of its road at Fordham or at any other convenient point by the most feasible routes to the village of West Farms."

"Under the provisions of this act the company now applying for a change of motive power built and put into operation a street railroad from the Harlem river to Fordham, on what is now called Third avenue. It did not apparently take advantage of its privilege of building a road to West Farms, either from Fordham or any other convenient point, at that time. A subsequent statute was passed, being chapter 892 of the Laws of 1867, amending section 9, permitting the corporation to lay tracks specifically, along the Boston Post road to the village of West Farms. In conformity with this act a branch was built on the Boston Post road, now called Boston avenue, from its intersection with the railroad first built at One Hundred and Sixty-fourth street to West Farms.

"The company now claims to have—and for the purpose of your opinion it may be conceded that it has—a large majority in value of consents of abutting property-holders on the system as a whole. It also has a majority of consents upon each street and avenue with the exception of Boston avenue from One Hundred and Sixty-fourth street to West Farms, where there is an apparent deficiency of some \$5,000.

"The company claims that inasmuch as it has the consent of a large majority in value upon the entire system, that it comes within the provisions of the statute which requires it to have a majority in value of the properties bounded on that portion of the railroad as to which a change of motive power is proposed. Contesting property holders on Boston avenue, on the other hand, claim that the words of the statute 'on that portion of the railroad' should be construed to mean a definite route, and not the whole system. While conceding that the company has the consent upon other portions of its road, they deny that it has the consent of that portion of its road going through Boston avenue, and is, therefore, precluded from a change there.

"In the course of the discussion it was proposed to consider that the words, 'that portion of the railroad' should mean a definite and continuous route, upon the ground that consents given for a change of One Hundred and Thirty-eighth street, for instance, ought not reasonably to be held to operate upon Boston avenue, as cars operating on Boston avenue would not naturally touch upon One Hundred and Thirty-eighth street, except to cross it, but would run down Boston avenue to its intersection with Third avenue, and thence along Third avenue to the terminus of the road at One Hundred and Twenty-ninth street.

"The company claims that except in the word 'route,' for the sake of argument, to be a definition of the words 'that portion of the railroad,' etc., that the route including Boston avenue extends from One Hundred and Twenty-ninth street and Third avenue through Third avenue and up Boston avenue, to the terminus at West Farms; that but one fare is paid, and a distinctive line of cars operate thereon; that it has a majority of value upon this route, if it be considered a route, and that it further has a majority in value of abutting property owners on Third avenue north of One Hundred and Sixty-fourth street to Fordham.

"The contestants dispute the justice of considering Boston avenue and Third avenue, from One Hundred and Sixty-fourth street to One Hundred and Twenty-ninth street, a route for the

reason that the Boston Avenue branch was built subsequently to the Third Avenue road.

- "The Board desires your opinion upon the statement of facts:
- "First. Has the railroad company the right to change its motive power on Boston avenue, in view of having obtained a majority in value of the contestants of abutting property holders upon its system as a whole?
- "Second. If not, has it the right to change its motive power upon Boston avenue for the reason that it has a majority in value of abutting property holders, regarding Boston avenue and Third avenue from One Hundred and Sixty-fourth street to One Hundred and Twenty-ninth street as one route?"

In answer to this letter an elaborate opinion is rendered by the Attorney-General, the conclusion of which is as follows:

- "In conclusion, I am of the opinion, in answer to your two questions:
- "First. The railroad company has the right to change its motive power on Boston avenue by reason of its having obtained a majority in value of the consents of abutting property holders upon its system as a whole.
- "Second. That in any event it has the right to change its motive power upon Boston avenue for the reason that it has obtained a majority in value of abutting property holders regarding Boston avenue and Third avenue from One Hundred and Sixty-fourth street to One Hundred and Twenty-ninth street as one route.
- "And in this connection I also say that while the consent of your board is necessary in order that the change proposed may be made at all, the giving of it does not in the least destroy or injure the rights of the property owners interested. The corporation can obtain no right to change its motive power without complying with the law, and if I am right in my construction, it has complied, but if I am wrong the whole matter can be easily determined and righted by the courts."

Pending this application, the different routes of this railroad company were carefully gone over and inspected by members of the board. The streets where this proposed change is to be made No. 98.]

are all from 80 to 100 feet in width. With the exception of Third avenue, and a portion of Boston avenue, they are not thickly built up. Long distances intervene where there are few houses, and where it is evident that a more rapid means of transit than that furnished by horses would be most desirable, not only to those who live there now, but to those who would be induced to live there, were such adopted. Indeed, all the territory through which this system of railroad ramifies, in the opinion of the board, would be greatly benefited by the change. The tracks of the railroad occupy but 15 feet in the center of these streets and avenues, ample space being allowed for vehicles of all kinds on either side of the tracks and between the curbs. It is proposed by the company that the poles to be erected between the tracks with brackets extending from both sides, from which to suspend the trolley wires. In its investigations of the various applications made to it, the board has seen no territory where the trolley system could be put into operation with so much benefit as here. this respect it sustains the views held by the Board of Electrical Control. It is satisfied that if the change be brought about, it will serve to bring a large population into that portion of the city.

So far as Third avenue is concerned, an elevated railroad already exists there. The board deems that it would be far wiser and better in every way to string the trolley wires from under the side of the structure, and so recommends. If this can not be done, however, little or no additional encumbrance would be placed on the street by erecting poles in close proximity to the columns of the elevated structure upon which to string the crosswires to support the trolley wire.

In view of the above-recited fact, the board deem that it is justified in approving, and hereby does approve, of a change of motive power from horses to the overhead single trolley electric railway system by Harlem Bridge, Morrisania and Fordham Railway Company upon the route of its railway in the city of New York, as follows:

Third avenue, from a point at or near East One Hundred and

Twenty-ninth street, over and across the Harlem river to North Third avenue; thence on, through and along North Third avenue to Fordham avenue; thence on, through and along Fordham avenue and Kingsbridge road to Pelham avenue; also on, through and along Boston avenue or Post road, from the intersection of Boston avenue and North Third avenue to West Farms; thence on, through and along Westchester or Tremont avenue to Bronx river; also on, through and along Westchester avenue, from the intersection of Westchester avenue and North Third avenue to the Bronx river, to Long Island Sound; also on, through and along East One Hundred and Thirty-eighth street from Harlem river to Long Island sound; also on, through and along East One Hundred and Thirty-eighth street (or Southern Boulevard) from its junction with Third avenue to Lincoln avenue; thence on, through, and along Lincoln avenue, from the intersection of Lincoln avenue, with East One Hundred and Thirty-third street to the intersection of North Third avenue and Lincoln avenue at or near East One Hundred and Thirty-eighth street, with the following conditions, however, which are made a part of this approval:

First. The rate of speed shall not exceed that to be reasonably fixed by the local authorities having charge of such streets and avenues as the route of the road passes through.

Second. The poles from which the wires are to be suspended upon all the streets and avenues, except the Third Avenue route, shall be erected between the tracks, with brackets extending to each side, and before erection their plan of construction shall be approved by the local authorities herein mentioned. On Third avenue the wires shall be strung from the lower side of the structure of the elevated railroad on that portion of the route where such structure is over the route of the surface company, if an agreement can be reached with the elevated railroad company to permit such construction; if not, the poles to be erected, upon which to string the wires shall be approved before construction, by the local authorities hereinbefore mentioned; the poles to be erected upon that portion of Third avenue not covered by the structure of the elevated railroad shall be of the construction and plan

to be approved by the local authorities hereinbefore mentioned; and all parts of the system not covered by the elevated structure, or where the wires are not strung under brackets from poles in the center of the street, a guard wire shall be strung over the trolley wire to prevent broken telegraph, telephone or other wires coming in contact with the trolley wires.

Third. No car shall be run with less than two men to operate it. Fourth. The company shall take all reasonable and proper means to prevent the current from its wires, through leakage, induction or otherwise, from interfering with the current upon the wires of other companies, whether telegraph, telephone, or otherwise.

Fifth. The company shall conform to all reasonable requirements of the local authorities heretofore or hereafter legally imposed by said authorities.

By the board,
WILLIAM C. HUDSON,
Secretary.

PERMIT TO ERECT OVERHEAD WIRES OVER THE HAR-LEM BRIDGE.

The Harlem Bridge, Morrisania and Fordham Railway Company having heretofore obtained permission to maintain its tracks upon and across the Harlem bridge, for the purpose of running cars across said bridge, which cars have been heretofore operated by animal traction, and the said company having determined to operate its cars across said bridge and upon the rest of its route by electric traction, and the said committee having submitted to the department of public parks a map and plan showing the nature of the construction proposed to be made and hereafter operated;

Now, for the purpose of enabling them to effect such change, and for the purpose of securing the proper operation of the bridge as a draw-bridge, when so operated, and for the purpose of securing to the public the greater facilities to be offered by the use of electric power, and for other purposes,

Resolved, That the said plans and maps as submitted be and the same is hereby approved, and directed to be filed.

Further resolved, That the Harlem Bridge, Morrisania and Fordham Railway Company, is required, requested and directed to maintain its tracks upon and across the Harlem bridge as set forth in the said map and plan, and is permitted to run cars operated by electric power thereon, and to erect upon the bridge poles fit to carry the wires necessary for the propulsion of the said electric cars upon the bridge, and to construct whatever additional fixtures and wires may be required for such purposes, and there is hereby granted to said company full power and authority to run cars to be operated by electric power on the said tracks so to be constructed upon and across the Harlem bridge. Provided, however, that the railway company shall continue to maintain an additional covering of plank upon the roadway on said bridge of the full width thereof, as they have heretofore maintained the same, and to keep the same in repair, and, provided further, that the said company shall so construct its tracks, poles, wires and fixtures appurtenances, and shall so run and manage and operate its cars as not to impair the use of the bridge as a draw-bridge, and, provided further, that the said company shall submit a detailed specification for the work to be done to this department for approval; and further, that this permission shall be subject to any change in the elevation or grade or approaches.

Further resolved, That should it be found at any time in operative or unadvisable by the said company to operate its cars by electric traction, it may abandon the use of such power and revert to the use of animal power.

In Board, July 15, 1891. Adopted.

CHARLES DEF. BURNS,

Secretary, Department of Public Works.

PERMIT TO ERECT OVERHEAD WIRES OVER THE MADI-SON AVENUE BRIDGE.

The Union Railway Company of New York city, having heretoforeapplied for permission to maintain its tracks upon and across Madison Avenue bridge for the purpose of running across the said bridge, which cars have been heretofore operated by animal traction, and the said company having determined to operate its cars across the said bridge and upon the rest of its route by electric traction. Now, for the purpose of enabling said company to effect such change and for the purpose of securing the proper operation of the bridge as a draw-bridge when so operated, and for the purpose of securing to the public the greater facilities to be afforded by the use of electric power, and for other purposes.

Resolved, That the Union Railway Company of New York city, is permitted to maintain its tracks upon and across the Madison Avenue bridge and is permitted to run cars operated by electric power thereon, and to erect upon the bridge poles fit to carry the wires necessary for the propulsion of the said electric cars upon the bridge, and to construct whatever additional fixtures and wires which may be required for such purposes, and has hereby granted to said company full power and authority to run cars to be operated by electric power on the tracks upon and across the Madison Avenue bridge, provided, however, that the said company shall so construct its tracks, poles, wires fixtures and appurtenances, and shall so run, manage and operate its cars as not to impair the use of the bridge as a draw-bridge and public highway, and provided, further, the said company shall submit a detailed specification for the work to be done to this department for approval; and, further, that this permission shall be subject to any change in the elevation or grade of the bridge and approaches.

Further resolved, That the Union Railway Company, in consideration of the license herein granted, and during the life of this permit shall supply electric power sufficient to operate the motor to turn the draw of the bridge, the power to be supplied during the whole 24 hours, it being understood that the department of parks shall supply the plant; notice that such supply of power shall be

required of the Union Railway Company of New York city shall be given within 30 days prior to the date when such power shall be required.

Further resolved, That should it be found at any time inoperative or unadvisable by said Union Railway Company of New York city to operate its cars by electric traction it may abandon the use of such power and revert to the use of animal power.

In board, November 23, 1891. Adopted.

CHARLES DEF BURNS,

Secretary, Department of Public Works.

PERMIT FOR OVERHEAD WIRES FOR SIGNALLING OR ELECTRIC LIGHT AND POWER.

Extracts from minutes of meeting of board of electrical control, held January 23, 1891.

"Whereas, The Harlem Bridge, Morrisania and Fordham Railway Company has applied to this board for permission to erect and maintain poles and wires for the purpose of enabling the said railway company to construct and operate its several lines of railway by the overhead single trolley electric railway system through the following streets and avenues, from a point at or near East One Hundred and Twenty-ninth street over and across the Harlem river to North Third avenue, thence on and through and along North Third avenue to Fordham avenue; thence on, through and along Fordham avenue and Kingsbridge road to Pelham avenue; also on, through and along Boston avenue to Post road from the intersection of Boston avenue and North Third avenue to West Farms; thence on, through and along Westchester or Tremont avenue to the Bronx river; also on, through and along Westchester avenue from the intersection of Westchester avenue and North Third avenue to the Bronx river; also on, through and along East One Hundred and Thirty-eight street from Harlem river to Long Island sound; also on, through and along East One Hundred and Thirty-third street (or Southern Boulevard) from its

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junction with Third avenue to Lincoln avenue; thence on, through and along Lincoln avenue from the intersection of Lincoln avenue with East One Hundred and Thirty-third street to the intersection of North Third avenue and Lincoln avenue at or near East One Hundred and Thirty-eighth street.

"And whereas, Due inquiry has been made by this board and due hearing of all the parties interested had for the purpose of determining the advisability of granting such permission.

"And, whereas, This board finds that such proposed change of motive power by said railway company would be a great improvement upon its present motive power, and would be of great benefit to the property owners in the annexed district and of great convenience to the traveling public,

Resolved. That permission be and it is hereby given to said Harlem Bridge, Morrisania and Fordham Railway Company, its successors or assigns, for the purpose of operating its said railway by the single trolley electric railway system, to erect place and maintain poles and wires in the streets, avenues and highways in which its tracks now or may hereafter be lawfully constructed, such as shall be necessary and proper for the operation of its said railway by the said system. The placing and erection of such necessary poles and wires along the streets, avenues and highways on either or both sides of the railroad track or tracks of the said railroad company shall be under the direction and determination of the engineer and the electrical expert of this board. and the said poles and wires shall be set in such places and at such distances apart along the line or lines of said railway company. and shall be of such height and depth as the said engineer and electrical expert of this board shall determine.

"And this license is given upon the express condition that whenever and wherever the surface of such street, avenue or highway, or any payment thereof shall be disturbed, excavated, deranged or taken up in whole or in part by said company, in the placing of said poles or wires the said company shall immediately thereafter restore the said roadway or payement as near as possible to their former condition, and for any refusal or intentional neglect of said railway company in that respect the license hereby granted may, after notice to said company, and opportunity, be thereupon revoked and annulled. The said company shall also indemnify and save harmless the city of New York, its officers and agents, from all claims, costs and damages, if any, arising through the excavation or derangement of the said streets, avenues or highways by the construction of such posts or wires.

"Resolved, That the poles and wires be so erected and maintained, shall be placed where practicable in the center of the street so as to cause the least possible disfigurement.

Resolved, That the license hereby granted shall be without prejudice to the right of power of the board whenever hereafter in its opinion it is deemed practicable for said railway company to operate its road or any great portion of it by means of an underground system, to order and direct the company to convert its overhead to such underground system.

"Resolved, That it is the express and earnest wish of the board that the railway company procure, if possible, the permission of the Elevated Railroad Company to hang wires on its structure in any street along the route mentioned where such structure exists.

"Resolved, That the railway company, where practicable, use cars having accommodation and seating capacity for from 34 to 36 people, and light its cars with electricity."

I hereby certify that the foregoing is a true copy of preambles and resolutions adopted at a meeting of the board of electrical control in and for the city of New York, held January 23, 1891.

Dated June —, 1894.

THOMAS MOSS,

Commissioner and Secretary.

PERMIT FOR OVERHEAD WIRES FOR SIGNALLING OR ELECTRIC LIGHT AND POWER.— No. 7,450.

Office of The Board of Electrical Control, 1226 Broadway, New York.

The Mayor of the City (ex-officio), president.

Theo. Moss, secretary.

Jacob Hess.

Walton Storm.

December 6, 1892.

Permission is hereby granted to the Union Railway Company of New York to erect the necessary poles, wires and overhead construction for the proper operation of the electric street surface cars on the following streets, provided said construction be done under the direction of the engineer of this board:

St. Ann's avenue, from Southern Boulevard to Third avenue, at One Hundred and Sixty-first street; One Hundred and Sixty-first street from Third avenue to Jerome avenue; from McComb's dam bridge to northern city line.

Morris avenue, from Third avenue to Fordham landing; Willis avenue to Webster avenue, and along Webster avenue to Bronx river road, and along said road to city line.

Tremont avenue, from city line to Webster avenue and Burnside avenue; along Burnside avenue to Sedgwick avenue and Cedar avenue; along Cedar avenue to Riverview terrace; along Riverview terrace to its intersection with Sedgewick avenue, also west through and along Dock street, from its intersection with Riverview terrace to the tracks of the New York and Northern Railroad Company.

Olin avenue, from Webster avenue to the city line.

Boscobel avenue, from Washington bridge to Jerome avenue.

From their terminus at Fordham to Kingsbridge road; along said road to Highbridge road, also along Highbridge road to Sedgwick avenue; along said avenue to Bailey avenue; along Bailey avenue to Broadway at Kingsbridge.

Sedgwick avenue, from Jerome avenue to the city line.

Consent of property owners first to be obtained.

By order of the board.

THEODORE MOSS.

Secretary.

PERMIT FOR OVERHEAD WIRES FOR SIGNALLING OR ELECERIC LIGHT AND POWER, No. 11,678.

February 23, 1894.

Permission is hereby granted to the Union Railway Company to string a feeder wire on poles under the electric light line on the west side of Third avenue, from the Harlem bridge to One Hundred and Eighty-fourth street, and to transfer one feeder wire from the east side to the west side of Third avenue, from One Hundred and Fiftieth street to One Hundred and Thirty-eighth street.

Provided that all feeder wires erected on Third avenue will be removed as soon as the above wires have been erected and proper connections made.

This construction to be done under the supervision of an inspector of this board.

Subject to the rules and regulations of the board as printed on back hereof.

By order of the board.

THEODORE MOSS,

Secretary.

PERMIT FOR OVERHEAD WIRES FOR SIGNALLING OR ELECTRIC LIGHT AND POWER, No. 11,679.

February 23, 1894.

Permission is hereby granted to the Union Railway Company to string two feeder wires on your poles under the electric light line on Boston avenue, from West Farms to Third avenue.

Provided the three feeder wires that are now up along this avenue will be removed as soon as the above are erected and connected.

This construction to be done under the supervision of an inspector of this board.

Subject to the rules and regulations of the board as printed on back hereof.

By order of the board.

THEODORE MOSS.

Secretary.

PERMIT FOR OVERHEAD WIRES FOR SIGNALLING OR ELECTRIC LIGHT AND POWER, No. 11,680.

February 23, 1894.

Permission is hereby granted to the Union Railway Company to string feeder wires on your poles along Main street, from your power-house to West Farms.

This work to be done under the inspector of this board.

Subject to the rules and regulations of the board as printed on back hereof.

By order of the board.

THEODORE MOSS,

Secretary.

PERMIT FOR OVERHEAD WIRES FOR SIGNALLING OR ELECTRIC LIGHT AND POWER, No. 11,983.

March 14, 1894.

Permission is hereby granted to the Union Railway Company, in accordance with a resolution of the board of aldermen in this city, passed December 27, 1892, to erect the necessary poles, wires and other construction for the operation of its electric street cars in the following streets, such construction to be under the direction and supervision of the engineer and electrical expert of this board:

From Third avenue and One Hundred and Thirty-eighth street to and across the Madison avenue bridge to One Hundred and Thirty-fifth street; thence westerly along One Hundred and Thirty-fifth street to Eighth avenue.

Subject to the rules and regulations of the board as printed on back hereof.

By order of the board.

THEODORE MOSS.

Secretary.

PERMIT FOR OVERHEAD WIRES FOR SIGNALLING OR ELECTRIC LIGHT AND POWER, No. 11,681.

February 23, 1894.

Prmission is hereby granted to the Union Railway Company to string one feeder on your poles along Main street, from your power-house to Westchester avenue; thence on the electric light poles to Third avenue.

This work to be done under the supervision of an inspector of this board.

Subject to the rules and regulations of the board as printed on back hereof.

By order of the board.

THEODORE MOSS,

Secretary.

PERMIT FOR OVERHEAD WIRES FOR SIGNALLING OR ELECTRIC LIGHT AND POWER, No. 11,983.

March 14, 1894.

Permission is hereby granted to the Union Railway Company of New York, in accordance with a resolution of the board of aldermen of this city, passed December 27, 1892, to erect the necessary poles, wires and other construction for the operation of its electric street cars in the following streets, such construction to be made under the direction and supervision of the engineer and electrical expert of this board.

From Third avenue and One Hundred and Thirty-eighth street to and across the Madison avenue bridge to One Hundred and Thirty-fifth street; thence westerly along One Hundred and Thirty-fifth street to Eighth avenue.

Subject to the rules and regulations of the board as printed on back hereof.

By order of the board.

THEODORE MOSS,

Secretary.

No. 98.] 1519

OFFICE OF THE BOARD OF RAPID TRANSIT RAILROAD COMMISSIONERS FOR THE CITY OF NEW YORK,

No. 256 Broadway, New York.

To the Honorable the Common Council of the City of New York:

The Board of Rapid Transit Railroad Commissioners for the city of New York, constituted by and according to the provisions of chapter 4 of the Laws of 1891, as amended by chapters 102 and 556 of the Laws of 1892, and by chapters 528 and 752 of the Laws of 1894, has considered and determined whether it is for the interest of the public and of the city of New York that a rapid transit railway or railways for the convenience and transportation of persons and property should be established therein and has determined that a rapid transit railway, in addition to those already existing, is necessary for the interests of the public and of such city, and by the concurrent vote of six members of the board has determined and established the routes and general plan of construction thereof, and hereby transmit to your honorable body a copy of its plans and conclusions as adopted, including such routes and general plans of construction:

First. The said commissioners, immediately after their respective appointments, severally took and subscribed the oath of office prescribed by law, which said oaths are filed in the office of the clerk of the city and county of New York. Thereafter this board, organized by the election, on the 8th day of June, 1894, of Alexander E. Orr to be its president, and on the 28th day of June. 1894, of John H. Starin to be its vice-president, and John Claffin to be its treasurer. The board duly framed and adopted by-laws and established rules and regulations for the proper exercise of the powers and duties conferred upon the board. It adopted a seal, and has kept a record of its proceedings, which at all reasonable times has been open to public inspection. This board has, since its organization aforesaid, conducted the inquest and investigation necessary in the premises as to whether it were to the interests of the public and the city of New York that a rapid transit railway or railways for the convenience and transportation of

persons and property should be established therein; and this board did thereupon determine as aforesaid that such a railway, in addition to those already existing was necessary.

Second. On the 17th day of July, 1894, this board adopted certain resolutions. All of the matters recited in the said resolutions are true as therein recited.

Thereafter and on the 9th day of May, 1895, this board, by the current vote of six of its members, adopted certain resolutions to which were subjoined a copy of the said resolutions of 17th July, 1894. All of the matters recited in the said resolution adopted on the 9th day of May, 1895, are true as therein recited. The same set out the routes and plans of construction and determined the bond as aforesaid. Annexed hereto and forming a part hereof, and entitled "Resolutions adopting route and plan of construction," is a copy of the said resolution with a copy thereto subjoined of the said resolution of 17th July, 1894.

Fourth. This board, in reaching the conclusions and preparing the plans which it has thus adopted and considered a very large amount of information and argument submitted to this board and its members by many citizens and by distinguished experts, as well as the information derived through the personal observation and investigation of the members of the board. Since the determination of the citizens of New York in favor of municipal construction was reached at the last election, this board and its members have been steadily engaged in the work of investigation. has had the continued assistance of its chief engineer, Mr. William Barclay Parsons, and of consulting engineers, Messrs. Alphonse Feeley and Theodore Cooper, associated with the chief engineer. It has been aided by the independent investigation and report of a commission of experts selected by this board, consisting of the Hon. Abram S. Hewitt and Messrs. Octave Chanute, Thomas C. Clark, William H. Burr and Charles S. Smith.

Fifth. This board is of the opinion that the rapid transit railway, the routes and general plans of construction of which it now submits for your consideration, can be completely built ready for operation (exclusive of the equipment, which is to be furnished by and be the property of the contractors who should operate the same) for less than the sum of \$50,000.000. Mr. Parsons, its chief engineer, has so reported; and his opinion is corroborated by the opinions of the experts employed by this board. Along a portion of the route the character of the construction as finally determined upon by the board is somewhat different from the plan of construction which was submitted to the commission of experts; but, in reaching their conclusions as to the cost of construction, the chief engineer and this board has made due allowance for the differences between the first plan and the plan of construction The estimate of cost includes about \$6,000,000 finally adopted. for the expense of removing, replacing and renewing sewers, pipes and other surface structures in the streets. The estimate also includes an allowance for the private property necessary to be acquired for stations and other purposes excepting, however, such rights, if any, of abutting owners in the streets, whether in vaults or otherwise, as it may be necessary to acquire in order to secure the contractor the right, free of lawful interruption or claim, to For such rights, in the opinion construct and operate the road. of the board, sufficient provision is made by the act of May 3, 1895.

The routes adopted by this board from Whitehall street to Fourteenth street, and From Fourteenth street on the west side to One Hundred and Eighty-fifth street, and on the east side from Fourteenth street to Forty-second street, are substantially coincident, as far as they go, with those adopted by the predecessor of this board and approved by your honorable body and by the General Term of the Supreme Court. This board, therefore, does not deem it necessary to set out at length the consideration which has constrained it to adopt such routes. In view of the serious questions involved in the use of Broadway below Fourteenth street, this board has given most careful consideration to the question of an alternative in this part of the city. Study and reflection have led it to confirm the judgment of its predecessor in selecting Broad-From Bowling Green to Thirty-fourth street is necessary to the success of the enterprise, Broadway being the main thor-

ougfare of the city to the east and to the west there already exist rapid transit facilities. Legal difficulties, apart from all questions of advantage, have presented resort to Elm street. side route from Forty-second street to One Hundred and Fortysixth street, has been placed where, in the opinion of this board, it will best serve the interests of the growing population of this city on the east side, all the conditions being duly considered. Third and Second avenues already have elevated railroads. proposed routes carries the road north of the Harlem river to a point from which an extension of the system can be had in various directions as soon as the means for construction should be pro-The terminal proposed is at a point convenient for the distribution of local business. It is true that, from Forty-second street to a point near Harlem river, the route substantially coincides with the route of the road used in the Grand Central But those railroads, as now operated, give only slight facilities for local traffic, and at high rates of fare, whereas the elevated railroads on Second and Third avenues afford much better facilities for that traffic at a moderate rate of fare to all this part of the city lying to the east of Park avenue and below the Harlem river, and to some part at least, of the district north of the Harlem river.

The plans formerly approved by the Supreme Court commission included a route to the city limits on the west side, a distance of nearly six miles north of One Hundred and Eighty-fifth street, the northerly limits of the westerly route proposed by this board; but on the easterly side the former route extended only to Forty-second street. In the opinion of the board it was so clearly necessary to extend the east side route to the north as to justify it in shortening the route on the west side by the six miles north of One Hundred and Eighty-fifth street in order to enable the board to add five miles to the route on the east side, as has been done by extending the route from Forty-second street to One Hundred and Forty-sixth street. That portion of the west side of the city reached by the westerly route proposed by the board at present has rapid transit facilities far inferior to those already enjoyed

on the east side partly, at least, by virtue, of the city's contribution to the sinking of the tracks on Park avenue.

Seventh. The principal features of the plan of construction are these:

- 1. The tracks are to be placed substantially upon a level.
- 2. The railway to be placed as near the surface as street conditions will permit. This renders the road more accessible to passengers than would any other plan of construction. At nearly all of the stations the road will be reached by stairways much shorter than the shortest stairway providing access to the present elevated railroads, both on account of the grades, and because, in going down to a railroad, the passenger reaches the platform before the tracks are reached, whereas on the elevated roads the platforms are reached by climbing higher than the tracks.
- 3. The total depth of excavation necessary for the construction of the railway and its foundations will be, in general, only about 18 feet, except in the center of the street, where the depth will be about two feet greater. From the plan it will be seen that the elements which involve risk to the neighboring buildings have been almost completely eliminated. The possibility of such risk does not deserve the consideration except in Broadway, below Thirty-fourth street. All the modern buildings on the street, and indeed all the buildings upon it except the very old ones, have foundations varying in depth from 20 to 30 feet or more. the house foundations extend to a greater depth than those of the railway there will be no interference with private property for the purpose of under-pinning house walls; nor is any damage to abutting property to be apprehended in any case by the construction of the railway. By the proposed arrangements for the various pipes and other surface structures the railway will be closer to the surface of the street by about six feet than according to the plans formerly approved by your honorable body and by the Supreme Court.
- 4. Below Park place, on Broadway, the present plan includes only two tracks. These will be placed in a tunnel 25 feet wide, and in

the center of the street, and as the excavation will extend below the surface of the street only about 18 feet, old and large buildings like Trinity church and the Astor house will not be exposed to the slightest danger.

5. The placing of the railway close to the street surface permits and requires an arrangement of sewers, water mains, gas pipe, electric conduits and other sub-surface structures in Broadway from Park place to Thirty-fourth street which will be most advantageous to the city and to the owners of property on Broad-The surface is now so crowded with pipes that it is impracticable to lay their additional mains or to increase the size of the present mains, which were laid years ago, and adjusted to the requirements and conditions of other times. The immense increase in the height of buildings which was then, unforseen has developed such a demand for water, gas and electric power in the lower parts of the city, that the pipes and conduits are already overtaxed, so that both the authorities of the city and the companies interested in the conduits are at a loss how to meet future needs. As the construction of the railway necessitates the removal of the surface structures, in any case, it is proposed, as shown by the drawings, to construct, in connection with the railway and at the side of, or beneath, the tracks large and well appointed galleries, in which all pipes and conduits will be placed. These galleries, when at the side, will facilitate the better ventilation and lighting of the tunnel; the place afforded by them will facilitate construction and repairs, but, in addition, the permanent deposit of the surface structures in the galleries will be a great convenience to the city and to the abutting owners. Where such galleries have been constructed, additional pipes may be laid and existing pipes inspected, altered and repaired, and new house connections made, without disturbing the surface of the Access to the galleries will be had through proper manholes at the intersections of streets, as well as from the railway The renewal of the surface structures will be of great advantage to the city and to abutting property. The new pipes

will be of the best modern type, and the leakages and injury incident to the age and character of the present pipes will be avoided. It is probable, also, that the city will avail itself of this opportunity to enlarge the sewer and water supply pipes, but the comparatively small additional expense which would be incident to such enlargement could not be considered a part of the cost of the railway. The new mains, if thus enlarged, will provide means of supply adequate for the future as well as for the present. The proposed galleries will be carried along Broadway from Park place to Thirty-fourth street. In making a contract for the construction and operation of the railway, the board will reserve to the city all revenues to be derived from the use of the galleries for any purpose, except a purpose necessary to the actual operation of the railroads. The abutting owners on Broadway after the construction of the road will enjoy the great, and for New York the unprecedented advantage of a street the surface of which need be disturbed only at long intervals of time, and then only to renew the pavements as they become worn by surface traffic.

- 6. The method of construction proposed by the board is neither experimental nor untried; the work will be attacked at as many points along the route as may be considered desirable. The progress of construction will be expedited to the utmost, and the discomforts resulting therefrom reduced to a minimum. The running of the surface cars is not to be suspended. On Broadway, south of Thirty-fourth street, except on Canal street, no more of the street surface is to be interfered with at any one time than one-half on one side or the other of the center line of the street. Openings are not to be more than 200 feet long, and consecutive openings are to be separated by free and undisturbed spaces of at least 500 feet.
- 7. The railway tracks are to be of standard gauge and the railway cars will be large and commodious.

The map and drawings accomp anying this report show the routes and general plan of construction adopted by the board as aforesaid.

Done pursuant to resolutions of the Board of Rapid Transit Railroad Commissioners for the city of New York, under the seal of the board and the signatures of its president and secretary at said city, this 9th day of May, 1895.

A. E. ORR,

President.

Lewis L. Delafield, Secretary.

RESOLUTIONS ADOPTING ROUTES AND PLAN OF CONSTRUCTION.

Whereas, The Board of Rapid Transit Railway Commissioners did on the 17th day of July, 1894, adopt resolutions of which a copy entitled "Resolutions of 17th July, 1894," is subjoined; and

Whereas, The people of the city of New York and the qualified electors thereof have, pursuant to the provisions of chapter 4, of the Laws of 1891, as amended by chapter 752 of the Laws of 1894, and of the said chapter 752 of the Laws of 1894, determined that the railway or railways in the city of New York mentioned in section 12 of chapter 752 of the Laws of 1894, shall be constructed by the said city and at the public expense; and

Whereas, this board has considered the routes, plans and specifications previously laid out and adopted by it and by its predecessors as mentioned, recited and provided in the said resolutions of 17th July, 1894; and

Whereas, This board, after having duly made thereon the inquest and investigation necessary in the premises, has duly considered and determined that it is for the interests of the public and of the city of New York that this board should change and modify the said routes, plans and specifications, and should adopt other and different routes, plans and specifications for such railway or railways so that the routes and general plan of construction should be as hereinafter provided; and

Whereas, This board has determined that a rapid transit railway for the convenience and transportation of persons and property, in addition to those already existing is necessary for the interest of the public and of the city of New York, and should be established therein as hereinafter provided;

Now, therefore, this board does hereby, in lieu of the routes heretofore adopted as aforesaid by this board and its predecessors, which routes are hereby abandoned, adopt the following routes for a rapid transit railway in the city of New York, and does hereby determine and establish the said route as follows, namely:

A route, the center line of which commences at a point under the westerly line or side of Whitehall street, distant along the same 62.5 north from the northerly line or side of South street produced, and proceeds then in opposite direction and along two diverging lines which form a loop at or near Battery park and converge to parallelism at or near the westerly line or side of Battery place, and of said loop under Battery place, Battery park, State street and that portion of Whitehall street, which les to the west of the center line hereof and between the southerly line or side of State street produced and the south ferry. The said center line thence from one side place of converging proceeds under Broadway and Union square to Fifty-ninth street; thence under the Boulevard to a point at or near One Hundred and Twentyfourth street; thence by vidauct along the Boulevard to a point at or near One Hundred and Thirty-fourth street; and thence under the Boulevard and Eleventh avenue to a point at or near One Hundred and Eighty-fifth street. Also a loop at City Hall park connecting with the route aforesaid at Broadway at or near Mail street, the center line of which loop proceeds from Broadway, under Mail street, and thence under City Hall park, Park row and Chambers street. Also a connection along Park row, from said loop last mentioned, the center line of said connection beginning at a point in Park row at the terminus of the New York and Brooklyn bridge, thence proceeding under Park row to Broadway way, and there connecting with the said route on Broadway at or near Fulton street.

Also a route, the center line of which shall diverge from the Broadway line at or near Fourteenth street, and run under Union square to Fourth avenue; thence under Fourth and Park avenues to the Harlem river; thence turning to the right by bridge across the Harlem river and thence turning to the left until the line shall coincide with the center line of Walton avenue produced at or near its intersection with One Hundred and Thirty-eighth street; and thence along the line of Walton avenue to a point at or near One Hundred and Forty-sixth street.

And this board does hereby, in lieu of the general plan and of all other plans and specifications for the construction of a rapid transit railway or railways in the city of New York, heretofore adopted by this board or by its said predecessors, all of which general plan, other plans and specifications are hereby abandoned, adopt a general plan of construction of the said railway, the routes of which are hereinbefore provided, and does in such general plan hereby adopted show as follows the general mode of operation and such detail as to the manner of construction as may be necessary to show the extent to which any street, avenue or other public place is to be encroached upon. The said general plan of construction hereby adopted is as follows:

For the said loop at or near Battery park and for the said loop at City Hall park, and for the route from the said place of converging at or near the westerly line or side of State street and the southerly line or side of Battery place, and thence running under Broadway to near Park place, two parallel tracks, the said tracks to be placed on the same level; for the route from near Park place to Fourteenth street, and from Fourteenth street to One Hundred and Thirty-fifth street on the west side, four parallel tracks, which shall be placed on the same level, except that wherever required by special necessities of surface or subsurface structures or other special or local necessities, the two inner tracks may be depressed below the level of the two outer tracks by a depth of not more than 10 feet; for the route from One Hundred and Thirty-fifth street to One Hundred and Eighty-fifth street on the west side, two parallel tracks on the same level; for the route from Fourteenth street on the east side, four parallel tracks, which shall be placed on the same level, except that wherver required by special

and local necessities, as aforesaid, the two inner tracks may be depressed below the level of the two outer tracks by a depth of not more than 25 feet; for the route from Forty-fourth street to One Hundred and Forty-fifth street and Walton avenue on the east side, two parallel tracks on the same level; and for the said connection under Park row three tracks on the same level.

The tracks shall be of standard gauge, that is to say, of a width of four feet eight and one-half inches between the rails. shall be 124 feet width in the tunnels and on the viaducts for each track, except that at stations, switches, turnouts, curves and crossovers the width may be increased to the extent permitted by the width of the tunnel, and except that on Broadway between Eighteenth and Twenty-first streets and between Twenty-sixth and Thirty-third street and wherever tide-water is encountered. The width for each track may be reduced to a width of not less than 11 feet. The tracks, wherever passing over or under the street, shall be placed over or under the central part of the street, except that on Park avenue, between Forty-fourth street and the Harlem river, the tracks may be placed one on each side of the railroad tunnel and viaduct now existing in Park avenue, and except that no tunnel or viaduct, or any wall or part thereof, under or along the street, shall, except at stations and station approaches, and except at places of access to subsurface structures, as hereinafter provided, be within a distance of five feet of the exterior line or side of the street. The tracks shall in all cases be placed in tunnels, except only that on the west-side route on the Boulevard, at or near One Hundred and Twenty-fourth street, the tracks shall emerge from the tunnel and be carried upon a viaduct along the Boulevard to a point at or near One Hundred and Thirty-fourth street, and there be taken again into tunnel, and except also that on the east side route, from Ninety-eighth street to the Harlem river and from the Harlem river to One Hundred and Forty-sixth street, the tracks shall be carried upon viaduct. Where Park avenue, above Ninety-sixth street, is already occupied by an existing viaduct, the two tracks shall be placed on separate viaducts over the street, one on each side of the existing

viaduct. Wherever the tracks are changed from tunnel to viaduct or from viaduct to tunnel the change shall be so made as to occupy or obstruct the use of the surface of the street to the least possible extent consistent with a proper gradient for the tracks.

The roof of the tunnel shall be as near the surface of the street as street conditions and grades will permit. The tunnel shall be not less than 12 feet in height in the clear. The maximum widths of the tunnel in the clear shall be as follows: For the Battery park loop and for the City Hall park loop, 35 feet deep; and for the route from the said place of converging at State street and Battery place to near Park place, 25 feet deep; for the said connection along Park row, 50 feet; for the route from at or near Park place to Fourteenth street, 68 feet; for the west-side route and from Fourteenth street to Eighteenth street, 68 feet; from Eighteenth street to Twenty-first street, 60 feet; from Twenty-first street to Twenty-sixth street, 68 feet, and from Twenty-sixth street to Thirty-third street, 60 feet; from Thirty-third street to Thirtyfourth street, 68 feet, from Thirty-fourth street to One Hundred and Twenty-fourth street, 70 feet; and from One Hundred and Twenty-fourth street to One Hundred and Eighty-fifth street, 50 feet; and for the east-side route, from Fourteenth street to Thirtythird street, 50 feet; and from Thirty-third street to Forty-fourth street, 60 feet; and for the route from Forty-fourth street to Ninetyeighth street the two tracks shall be in separate tunnels, one on each side of the present railroad tunnel in Park avenue, and each of said separate tunnels shall be 12½ feet wide at each cross street; the tunnel may, in order to provide convenient access to pipes, wires, sewers and other surface structures, have, within the limits of the sides or exterior lines of such cross streets or such lines produced, an additional width on each side of the route not to exceed on each side 15 feet, and the area of additional width not on either side to approach nearer than 12 feet to either side or exterior line of such cross street. Footways between the tracks shall be provided the whole length of the line, and refuge niches shall be built in the side walls at proper intervals for the convenience and protection of employes. Whenever necessary for

the proper support of the street surface, the roof of the tunnel shall be of iron or steel girders, with brick or concrete arches supported by iron or steel columns and masonry walls, or the roof shall be a masonry arch.

Viaducts shall be built with a width of $12\frac{1}{2}$ feet for each track, and with an additional width of three feet on each side for outside footwalks. Viaducts may be built of metal or masonry, or both.

The Harlem river shall be crossed by a double-track drawbridge, not less than 24 feet in the clear above high-water mark, with clear spans of not less than 100 feet between the center pier and bulkhead lines, measured at right angles to the latter.

Adjacent tracks shall be connected by necessary and suitable switches and connections.

From Park place to Fourteenth street, and from Fourteenth street to Thirty-fourth street, under Broadway, the pipes, wires, sewers and other subsurface structures, where the tunnel shall be in the clear not less than 68 feet wide, shall be placed in suitable galleries in the tunnel and at the outside of the exterior tracks; but any such pipes, wires, sewers or other subsurface structures may be placed in suitable galleries underneath the tracks, and, wherever so placed, the width of the tunnel between Park place, and Thirty-fourth street shall not be more than 50 feet. Such pipes, wires, sewers and other substructures shall, at any part of the side routes be removed or disturbed only as may be necessary for the construction and operation of the railway, and, if removed or disturbed, shall be replaced under the streets in such manner and in such location as that the use and service thereof may not be Such pipes, wires, sewers and other subsurface structures shall be left or shall be so arranged as to give free access for their repair or alteration, or for the placing with them of new pipes, wires, sewers or other like structures, and for making connections between the same and adjacent buildings at any time.

The conjunction of tracks near Fourteenth street shall be effected by dividing them under Union square, raising one and depressing the other, so that trains going in opposite directions

shall not cross on the same level. Stations and station approaches shall, in general, be at the intersection of streets and shall be built under (or if the position of tracks so require, over) streets and immediately adjoining private abutting property or through private property to be acquired for the purpose, or both under (or over) streets and through private property as aforesaid, except that on the Boulevard stations and station approaches may be in the center of the street. The streets under or over which station or station approaches shall be built may include cross streets, but no part of any cross street shall be used for a station or station approach at a distance greater than 75 feet from the exterior line or side of the street of the route. The word "street," wherever used herein, shall include an avenue or public place.

Along the Boulevard there shall be openings in the surface of the street from the tunnel for purposes of ventilating and light. Such openings shall be guarded by convenient and ornamental inclosures. The opening shall not exceed 20 feet in width and 50 feet in length. No two openings shall be within 50 feet of one another. No opening or part thereof shall be within the limits of, or opposite to, any street intersecting the Boulevard; and within the distance of any block on the Boulevard between any two adjacent crossing streets there shall not be more than two such openings.

The general mode of operation shall be by electricity or some other power not requiring combustion within the tunnels or on the viaducts, and the motors shall be capable of moving trains at a speed of not less than 40 miles per hour for long distances, exclusive of stops.

The manner of construction shall be by tunneling or excavation, provided that on Broadway, below Thirty-fourth street, no excavation, except on Canal street, shall disturb more than one-half of the street surface at one time, and that, except at Canal street, no opening shall exceed 200 feet in length and that no two openings shall be within less than 500 feet from each other and that after the opening shall be bridged so as to provide for the street traffic.

And it is further resolved that the plans now filed with the said board and entitled Exhibits Nos. 1 to 57, inclusive, be, and the same hereby are, adopted by this board as showing said routes and general plans of construction.

RESOLUTIONS OF JULY 17, 1894.

Whereas, The Board of Rapid Transit Railroad Commissioners in and for the city of New York, organized under and in pursuance of chapter 4 of the Laws of 1891, and exercising the powers and authority conferred upon it in and by said act prior to the 22d of May, 1894, having determined that it was for the interest of the public and of the city in which it was appointed that a rapid transit railway or railways for the convenience and transportation of persons and property should be established therein, did, on the 19th day of October, 1891, at a meeting of said board duly convened and held, at which all of the members of said board were present, by the concurrent vote of all of the said members, determine and establish certain routes and the general plan of construction for a rapid transit railway in the city of New York as set forth in the resolution so establishing and determining the same, adopted by said vote at said meeting of said board, which said resolution was in the following words:

"Resolved, That this board adopt the following routes and general plans of construction for a rapid transit railway in the city of New York.

"A route, the center line commencing at a point under the westerly side of Whitehall street distant along the same 62.5 feet north from the northerly line of South street produced; thence by diverging lines under Whitehall street and Battery park and State street, respectively, forming a loop line, the track converging to parallelism at a point under Broadway, between Bowling Green and Morris street; thence under Broadway and Union square to Fifty-ninth street; thence under the Boulevard to One Hundred and Twenty-first street; thence by a viaduct to One Hundred and Thirty-fourth street; thence under the Boulevard to the south line of One Hundred and Fifty-sixth street; thence by viaduct to the north line of One Hundred and Fifty-ninth street; thence under the Boulevard to One Hundred and Sixtyninth street: thence under Eleventh avenue to a point 1,460 feet north of the center line of One Hundred and Ninetieth street; thence by a viaduct on the same straight line produced to a point 442 feet north from the intersection of said straight line with the center line of the Kingsbridge road; thence to the right on a curve with a radius of 1,910 feet and in tunnel a distance of 860.6 feet; thence by tangent 138 feet; thence by curve to the left with a radius of 1,910 feet, a distance of 350 feet in tunnel and a distance of 510.6 feet by a viaduct to a point on a line coincident 420 feet north from the center line of Two Hundred and Seventeenth street; thence by viaduct and on a tangent coincident with the center line of Audubon avenue produced across to the Government Ship Canal, and thence by the same tangent and in depressed structure 670 feet; thence on the same tangent and by viaduct to and across Spuyten Duyvil creek, and thence on the same tangent by viaduct depressed structure and tunnel, as the contour of the lands may require to a point 100 feet north of the center line of Delafield lane; thence to the left on a curve with a radius of 1,910 feet to a point 30 feet south from the center line of Delafield's old lane; thence by a tangent to a point 112.4 feet south from the south line of Rock street; thence to the right by a curve with a radius of 500 feet for a distance of 220.8 feet to a point in the center line of Forest street 112.4 feet north of the south line of Rock street; thence by tangent coincident with the center line of Forest street to the city limit.

Also a loop from Broadway, under Mail street, City Hall park, Park row and Chambers street, and again connecting with the Broadway line.

Also a route, the center line, diverging from the Broadway line at or near Fourteenth street, running under Union square to Fourth avenue; thence under Fourth and Park avenue to Union square to Fourth avenue; thence under Fourth and Park

avenue to a point 112.15 feet north from the north line of Fortieth street; thence to the left on a curve with a radius of 250 feet for a distance of 154.55 feet; thence by tangent a distance of 292.18 feet to a point 40.1 feet north from the south line of Forty-second street, and 215.7 feet west from the center line of Fourth avenue; thence to the right on a curve with a radius of 250 feet at a distance of 124.23 feet; thence by tangent 46.39 feet; thence to the left on a curve with a radius of 250 feet a distance of 182.37 feet to a point 4.4 feet north from the north line of Forty-third street and 159.5 feet; thence to the right on a curve with a radius of 400 feet a distance of 332.28 feet to a point in the center line of Madison avenue 65.6 feet north from the north line of Forty-fourth street; thence under Madison avenue to the south line of Ninetysixth street; thence to the right on a curve with a radius of 400 feet for a distance of 250.7 feet; thence by tangent to a distance of 132.98 feet; thence to the left on a curve with a radius of 400 feet a distance of 240.7 feet to the south line of Ninety-eighth street at a point distant 175 feet east from the easterly line of Madison avenue; running thence by a viaduct parallel with Madison avenue, the center line, distant 175 feet east from the easterly line thereof across streets and private property to a point of 124.6 feet north from the north line of One Hundred and Thirty-fourth street, and distant 175 feet east from the easterly line of Madison avenue; thence to the right on a curve with a radius of 357.15 feet a distance of 408.6 feet to a point on the west line of River street 54 feet 11 inches south from the south line of One Hundred and Thirty-eighth street at an intersection with the center line of Walton avenue, as the same was laid upon the topographical maps of the Twenty-third and Twenty-fourth wards of the city of New York, issued from the office of commissioners of street improvements of the Twenty-third and Twenty-fourth wards; thence according to said map by viaduct, depressed structure and tunnel, as the contour of the land may require, along the line of Walton avenue to Stebbins place; thence to the intersection of the center line of Sylvan avenue and Belmont place; thence along the lines of Sylvan place to its terminus at Orchard street; thence in a

straight line to the center line of Berrian avenue at the southerly point thereof; thence along the center line of Berrian avenue to First street; thence in a straight line to the intersection of the center lines of Kirkside avenue and Croton avenue; thence along the Kirkside avenue to Travers street; and thence by straight line to and under Jerome avenue to the north line thereof.

Resolved, That the general plan of construction of the loop under Battery Park, State and Whitehall streets shall be double track; from the Morris street junction to near Vesey street shall be three parallel tracks on the same level with suitable switches and connections between them; from Vesey street to One Hundred and Ninetieth street on the west side line shall be four parallel tracks on the same level. That on the east side lines from Fourteenth street to the Harlem river shall be four parallel tracks in the same level, and thence to the city limits shall be two parallel tracks on the same level. That the tunnels shall not be less than 11 feet six inches in height in the clear, and 11 feet in width from each track; that whenever necessary for the proper support of the surface of the street, the roof of the tunnel shall be of iron girders with solid plate iron covering, supported by suitable iron columns between each of the tracks, and supporting walls on the outside. The roof of the tunnel shall be as near the surface of the street as the pipes and underground structures laid down therein and the street grades will permit. That viaducts shall be of masonry or iron or both combined. That the government ship canal and Harlem river shall be crossed by double track draw bridges not less than 50 feet in the clear above main high water-mark, with clear spans of not less than 125 feet between center piers and bulkhead lines. That north of the Harlem river the construction shall be by viaduct, depressed structure and tunnel as the grades of land upon the proposed route shall require. That the junction of the tracks near Fourteenth street shall be effected by dividing them around Union Square, raising one pair and depressing the other, so that trains going in opposite directions shall not cross on the same level. That all station approaches shall be as far as possible through private property to be acquired for that purposeexcept that on the Boulevard station, approaches may be in the center of the street.

That a footway be provided the whole length of the line between the center tracks, and that refuge niches be built in the side walls at proper intervals for the convenience and protection of employes.

That the motive power shall be electricity or some other power not requiring combustion within the tunnel; and the motor or motors shall be capable of uniform speed for long distance of not less than 40 miles per hour, exclusive of stops.

"Resolved, That the manner of construction from South Ferry to about Thirty-fourth street shall be by underground tunnelling without disturbing the surface of the street. In case of necessity the excavation below Beaver street and in the neighborhood of Canal street, and at such other special points as this commission may, during the progress of the work, determine, may be made by excavation from the street surface, and all excavation in Fourth street above Fourteenth street and in all other streets and avenues above Thirty-fourth street may be made in the same manner.

And, whereas, The board of rapid transit railroad commissioners did thereafter transmit to the common council of the city of New York, a copy of said plans and conclusions, as so adopted, which were received by said common council on the 21st day of October, 1891, at 1 o'clock p. m., at a meeting of said common council at 2 o'clock p. m., for the consideration of such plans and concluduly convened on such date at such hour, whereupon said common council did duly appoint the Twenty-eighth day of October, 1891, sions, and upon the last-mentioned date, at a meeting thereof duly convened on such day at such hour, the said common council considered such plans and conclusions and did duly approve such plans and conclusions, and consent to the construction of a railway or railways in accordance therewith by resolution duly adopted by more than a majority, taken by ayes and nays, of all the members of said common council, which said resolution was duly approved by the mayor of said city on the 31st day of October, 1891, and was in the following words:

[Assembly, No. 98.]

"Whereas, The Board of Rapid Transit Railroad Commissioners for the city of New York, appointed by the provisions of chapter 4, Laws of 1891, having determined upon the routes and general plans of construction of a rapid transit railway for the convenience of transportation of persons and property to be established in said city, in addition to the already existing lines, and having thereupon transmitted to the common council of the city of New York a copy of said plans and conclusions as adopted, which plans and conclusions thus adopted were received by such common council on the 21st day of October, 1891, at 1 o'clock p. m., at a meeting of said common council, duly convened on such date at such hour; and said common council having, by resolution, duly adopted at said meeting, appointed a day not less than one week, nor more than ten days after the receipt of such plans and conclusions, for the consideration thereof, to wit: this 28th day of October, 1891, at 2 o'clock p. m., and said common council, on such date so fixed, having proceeded with the consideration of such plans and conclusions:

Resolved, That the common council of the city of New York do hereby approve such plans and conclusions, and do hereby consent to the construction of a railway or railways in accordance therewith.

The route or routes and general plans of construction of a rail-way, the plans and conclusions for which are hereby approved in accordance with the provisions of section 5 of chapter 4 of the Laws of 1891, and to the construction of which the mayor, aldermen and commonalty hereby consent is as follows:

A route, the center line commencing at a point under the westerly side of Whitehall street produced; thence by diverging lines under Whitehall street, Battery park and State street, respectively, forming a loop line, the tracks converging to parallelism at a point under Broadway, between Bowling Green and Morris street; thence under Broadway and Union square to Fifty-ninth street; thence under the Boulevard to One Hundred and Twentyfirst street; thence by viaduct to One Hundred and Thirty-fourth street; thence under the Boulevard to the south line of One

Hundred and Fifty-sixth street; thence by viaduct to the north line of One Hundred and Fifty-ninth street; thence under the Boulevard to One Hundred and Sixty-ninth street; thence under Eleventh avenue to a point 1.46 feet north of the center line of One Hundred and Nineteenth street; thence by viaduct, on the same straight line produced, to a point 442 feet north from the intersection of said straight line with the center line of Kingsbridge road; thence to the right on a curve, with a radius of 1.91 feet, and in a tunnel a distance of 860.6 feet; thence by a tangent 138 feet; thence by a curve to the left, with a radius of 1.91 feet, a distance of 350 feet in tunnel, and a distance of 510.6 feet by viaduct, to a point on a line coincident with the center line of Audubon avenue produced, and distance 425 feet north from the center line of Two Hundred and Seventeenth street; thence by viaduct, and on a tangent coincident with the center line of Audubon avenue, produced across the Government Ship canal, and thence by the same tangent and indepressed structure 670 feet; thence on the same tangent and by viaduct, and across Spuyten Duyvil creek; and thence on the same tangent, by viaduct, depressed structure and tunnel, as the contour of the lands may require, to a point 100 feet north of the center line of Dale field lane; thence to the left, on a curve with a radius of 1.91 feet, to a point 30 feet south from the center line of Dalefield's old lane; thence by a tangent to a point 112.4 feet south from the south line of Rock street; thence to the right by a curve, with a radius of 500 feet, for a 220.8 feet to a point in the center line of Forest street 112.4 feet north of the south line of Rock street; thence by tangent coincident with the center line of Forest street, to the city limit.

Also, a route, the center line diverging from the Broadway line at or near Fourteenth street, running under Union square to Fourth avenue; thence under Fourth and Park avenues to a point 112.15 feet north from the north line of Fourteenth street; thence to the right, on a curve with a radius of 250 feet, a distance of 154.55 feet; thence by tangent a distance of 292.18 feet to a point 40.1 feet north from the south line of Forty-second street, and

215.7 feet west from the center line of Fourth avenue; thence to the right on, a curve with a radius of 250 feet, a distance of 124.23 feet; thence by tangent 46.39 feet; thence to the left, on a curve with a radius of 250 feet, a distance of 182.37 feet to a point 4.4 feet north from the center line of Forty-third street and 159.5 feet east from the center line of Madison avenue; thence by tangent 39.53 feet; thence to the right, on a curve with a radius of 400 feet, a distance of 332.28 feet, to a point in the center line of Madison avenue, 65.6 feet north from the north line of Forty-fourth street; thence under Madison avenue to the north line of Ninety-sixth street; thence to the right, on a curve with a radius of 400 feet, for a distance of 240.07 feet; thence by tangent a distance of 132.98 feet; thence to the left, on a curve with a radius of 400 feet a distance of 240.7 feet to the south line of Ninety-eighth street, at a point distant 175 feet east from the easterly line of Madison avenue; running thence by viaduct parallel with Madison avenue, the center line distant 175 feet east from the easterly line thereof, across streets and private property to a point 124.6 feet distant 175 feet east from the easterly line of Madison avenue; thence to the right, on a curve with a radius of 357.15 feet, a distance of 408.6 feet, to a point on the west line of River street, 54 feet 11 inches south from the south line of One Hundred and Thirty-sixth street; thence by tangent across the Harlem river, a distance of 400 feet; thence to the left, on a curve to the south line of One Hundred and Thirty-eighth street at its intersection with the center line of Walton avenue, as the same is laid down upon the topographical maps of the Twentythird and Twenty-fourth wards of the city of New York, issued from the office of the commissioner of street improvements of the Twenty-third and Twenty-fourth ward; thence according to said map, by viaduct, depressed structure and tunnel, as the contour of the lands may require, along the line of Walton avenue to Stebbins place; thence to the intersection of the center line of Sylvan avenue and Belmont place; thence along the line of Sylvan avenue to its terminus at Orchard street; thence in a straight line to the center line of Berrian avenue, at the southerly point

thereof; thence along the center line of Berrian avenue to First street; thence in a straight line to the intersection of the center line of Kirkside avenue and Croton avenue; thence along Kirkside avenue to Travers street, and thence by straight line to and under Jerome avenue to the north line thereof.

The general plan of construction of the loop under Battery park, State and Whitehall streets shall be double track; from the Morris street junction to near Vesey street, shall be three parallel tracks on a same level, with suitable switches and connections between them; from Vesev street to One Hundred and Nineteenth street, on the West Side line, shall be four parallel tracks on the same level; and thence across the Government Ship canal and Spuyten Duyvil creek to the city limits, shall be two parallel tracks on the same level. On the East Side line, from Fourteenth street to the Harlem river, shall be four parallel tracks on the same level; and thence to the city limits, shall be two parallel tracks on the same level. The tunnel shall not be less than 11 feet and 6 inches in height in the clear, and 11 feet in width for each track. Whenever necessary for the proper support of the surface of the street, the roof of the tunnel shall be of iron girders, with solid plate iron covering, supported by suitable iron columns, between each of the tracks and supporting walls on The roof of the tunnel shall be as near the surface of the street as the pipes and underground structures now laid therein and the street grade will permit. Viaducts shall be of masonry or iron, or both combined. The Government Ship canal and the Harlem river shall be crossed by double-track drawbridges not less than 50 feet in the clear above mean high water marks, with clear spans of not less than 125 feet between the center piers and bulkhead line. North of the Harlem river the construction shall be by viaduct, depressed structure and tunnel, as the grades of the land upon the proposed routes shall require. The junction of the tracks near Fourteenth street shall be affected by dividing them around Union square, raising one pair and depressing the other, so that trains going in opposite directions shall not cross on the same level. All station approaches shall be, as far as possible, through private property, to be acquired for that purpose, except that on the Boulevard, station approaches may be in the center of the street. A foot-way shall be provided the whole length of the line, between the center of the tracks, and refuge niches shall be built in the side walls, at proper intervals, for the convenience and protection of employes.

The motive power shall be electricity or some other power not requiring combustion within the tunnel, and the motors shall be capable of a uniform speed for long distances of not less than 40 miles per hour, exclusive of stops.

The manner of construction from South ferry to about Thirty-fourth street, shall be of underground tunneling without disturbing the surface of the street. In case of necessity, the excavation below Beaver street, and in the neighborhood of Canal street, and at such other special points as this commission may, during the progress of the work determine, may be made by excavation in Fourth avenue above Fourteenth street, and in all other streets and avenues above Thirty-fourth street may be made in the same manner; and,

Whereas, Said plans and conclusions were, by said Board of Rapid Transit Commissioners, transmitted to the department of public parks of said city, with the request that said department approve of the same and consent to the consideration of a railway thereunder, whereupon the board of parks, as head of said department, at a meeting of said board, duly held on the 20th day of November, 1891, did fix, and on behalf of said department, by resolution duly passed by it, approve such plans and conclusions and consent to the construction of a railway or railways in accordance therewith with said resolutions, which said resolution was in the following words:

Whereas, The Board of Rapid Transit Railroad Commissioners for the city of New York, appointed by the provision of chapter 4 of the Laws of 1891, having determined upon the route or routes and general plan of construction of a rapid transit railroad, for the convenience and transportation of persons and property should be established in said city, in addition to the already exist-

ing lines and having thereupon transmitted to the common council of the city of New York a copy of said plans and conclusions, as adopted, which plans and conclusions, thus adopted, were received by said common council on the 21st day of October, 1891, at 2 o'clock p. m., and said common council on such date so fixed, having proceeded to the consideration of such plans and conclusions, and having on said 28th day of October adopted a resolution which the following is a copy:

Resolved, That the common council of the city of New York do hereby approve such plans and conclusions, and do hereby consent to the construction of a railway or railways in accordance therewith. The route or routes and general plan of construction of a railway, the plans and conclusions for which are hereby approved in accordance with the provisions of section 5 of chapter 4 of the Laws of 1891, and the construction of which the mayor, aldermen and commonalty hereby consent, is as follows:

A route, the center line commencing at a point under the westerly side of Whitehall street, distant along the same 62.5 feet north from the northerly line of South street produced; thence by diverging lines under Whitehall street and Battery park and State street, respectively, forming a loop line, the tracks converging to a parallelism at a point under Broadway, between Bowling Green and Morris street; thence under Broadway and Union square to Fifty-ninth street; thence under the Boulevard to One Hundred and Thirty-fourth street; thence under the Boulevard to the south line of One Hundred and Fifty-sixth street; thence by viaduct to the north line of One Hundred and Fifty-ninth street; thence under the Boulevard to One Hundred and Sixty-ninth street; thence under Eleventh avenue to a point 1,460 feet north of the center line of One Hundred and Ninetieth street; thence by a viaduct on the same straight line produced to a point 442 feet north from the intersection of said straight line with the center line of the Kingsbridge road; thence to the right on the curve with a radius of 1,910 feet and in a tunnel a distance of 860.6 feet; thence by tangent 138 feet; thence by curve to the left with a radius of 1,910 feet, a distance of 350 feet in tunnel and a distance of 510.6 feet

by viaduct, to a point on a line coincident with the center line of Audubon avenue and distant 425 feet north from the center line of Two Hundred and Seventeenth street; thence by viaduct on a tangent coincident with the center line of Audubon avenue produced across the government ship canal, and thence by the same tangent and indepressed structure 670 feet; thence on the same tangent and by viaduct to and across Spuyten Duyvil creek, and thence on the same tangent by viaduct, depressed structure and tunnel, as the contour of the land may require to a point 100 feet north of the center line of Delafield lane; thence to the left on a curve with a radius of 1,910 feet to a point 30 feet south from the center line of Delafield lane; thence by a tangent to a point 112.4 feet south from the south line of Rock street; thence to the right by a curve with a radius of 500 feet for a distance of 220.8 feet to a point in the center line of Forest street 112.4 feet north of the south line of Rock street; thence by tangent coincident with the center line of Forest street in the city limits.

Also, a loop from Broadway under Mail street, City Hall park, Park row and Chambers street, and again connecting with the Broadway line.

Also, a route, the center line diverging from the Broadway line at or near Fourteenth street, running under Union square to Fourth avenue; thence under Fourth and Park avenues to a point 112.15 feet north from the north line of Fortieth street; thence to the left on a curve with a radius of 250 feet for a distance of 154.55 feet; thence by tangent to a distance of 292.18 feet to a point 40.1 feet north from the south line of Forty-second street and 215.7 feet west from the center line of Fourth avenue; thence to the right on a curve with a radius of 250 feet a distance of 124.23 feet; thence by tangent 46.39 feet; thence to the left on a curve with a radius of 250 feet a distance of 182.37 feet to a point 4.4 feet north from the north line of Forty-third street and 159.5 feet east from the center line of Madison avenue; thence by tangent 39.53 feet; thence to the right on a curve with a radius of 400 feet for a distance of 240.07 feet; thence by tangent to a distance 132.98 feet; thence to the left on a curve with a radius of 400 feet a distance of

240.07 feet to the south line of Ninety-eighth street at a point distant 175 feet east from the easterly line of Madison avenue; thence to the right on a curve with a radius of 357.15 feet a distance of 408.6 feet to the point on the west line of River street, 54 feet 11 inches south from the south line of One Hundred and Thirty-sixth street; thence by tangent across the Harlem river a distance of 400 feet; thence to the left on a curve to the south line of One Hundred and Thirty-eighth street, at its intersection with the center line of Walton avenue, as the same is laid down upon the topographical maps of the Twenty-third and Twenty-fourth wards of the city of New York, issued from the office of the commissioner of street improvements of the Twenty-third and Twenty-fourth wards of the city of New York; thence, according to said maps by viaduct, depressed structure and tunnel, as the contour of the land may require, along the line of Walton avenue to Stebbins place; thence to the intersection of the center line of Sylvan avenue and Belmont place; thence along the line of Sylvan avenue to its terminus at Orchard street; thence in a straight line to the center line of Berrian avenue at the southerly point thereof; thence along the central line of Berrian avenue to First street; thence in a straight line to the intersection of the center lines of Kirkside avenue and Croton avenue; thence along Kirkside avenue to Travers street, and thence by straight line to and under Jerome avenue to the north line thereof.

The general plan of construction of the loop under Battery park, State and Whitehall streets shall be three parallel tracks on the same level, with suitable switches and connections between them; from Vesey to One Hundred and Ninetieth street on the west side line shall be four parallel tracks on the same level; and thence across the government ship canal and Spuyten Duyvil creek to the city limits shall be two parallel tracks on the same level. On the east side line, from Fourteenth street to the Harlem river, shall be four parallel tracks on the same level, and thence to the city limit shall be two parallel tracks on the same level. The tunnels shall be not less than 11 feet 6 inches in height in the clear, and 11 feet in width for each track. Whenever necessary for proper sup-

port of the surface of the street, the roof of the tunnel shall be of iron girders, with solid plate iron covering, supported by suitable iron columns between each of the tracks, and supporting walls on the outside. The roof of the tunnel shall be as near the surface of the street as the pipe and underground structures now laid therein and the street grades will permit. Viaducts shall be of masonry or iron, or both combined. The government ship canal and the Harlem river shall be crossed by double track drawbridges not less than 50 feet in the clear above mean high-water mark, with clear spans of not less than 125 feet between the center piers and bulkhead line. North of the Harlem river the construction shall be by viaduct, depressed structure and tunnel as the grades of the land upon the proposed routes shall require. The junction of the tracks near Fourteenth street shall be effected by dividing them around Union square, raising one pair and depressing the other, so that trains going in opposite directions shall not cross on the same level. All station approaches shall be as far as possible through private property to be acquired for that purpose, except that on the Boulevard station approaches may be in the center of the street.

A footway shall be provided the whole length of the L line between the center track, and refuge niches shall be built in the side walls at proper intervals for the convenience and protection of employes.

The motive power shall be of electricity, or some other power not requiring combustion within the tunnel; and the motor or motors shall be capable of uniform speed for long distances of not less than forty miles per hour, exclusive of stops.

The manner of construction from South ferry to about Thirty-fourth street shall be by under ground tunnel without disturbing the surface of the street. In case of necessity the excavation below Beaver street, and in the neighbodhood of Canal street, and at such other special points as this commission may, during the progress of the work, determine, may be made by excavation from the street surface, and all excavations in Fourth avenue about Fourteenth street and in all other streets and avenues above Thirty-fourth street may be made in the same manner; and,

Whereas, The mayor of the city of New York thereafter approved such resolutions of the common council; and,

Whereas, it is provided by section 5 of chapter 4 of the Laws of 1891, that where in any city a line of rapid transit may be laid, and in acoredance with the provisions of such act, the exclusive control of any street, road, highway or avenue, which is to be used or occupied by any railway or railways constructed under the provisions of such act, is by law vested in any local authority other than the common council of such city. The approval of the aforesaid plans and conclusions and the consent to the construction of such railways are under, shall be given by such local authority in place as if required, in addition to such appoval and consent by said common council and with like effect; and,

Whereas, the said Board of Rapid Transit Railroad Commissioners in and for the city of New York have transmitted to the department of public parks of the city of New York a duplicate of a report made as aforesaid to the common council of the city; now,

Therefore, the said department of public parks does hereby approve such plans and conclusions were by said Board of Rapid Transit Railroad Commissioners transmitted to the commissioner of street improvements and of the Twenty-third and Twenty-fourth wards of the city of New York with the request that said commissioner approve of the same and consent to the construction of a railway or railways thereunder, whereupon Louis J. Heintz, then being such commissioner, did on the 20th day of November, 1891, as such commissioner approve such plans and conclusions and consent to the construction of a railway or railways in accordance therewith, which appoval and consent was given under the hand and seal of said commissioner, in the following words:

"Whereas, the Board of Rapid Transit Railroad Commissioners for the city of New York appointed by the provisions of chapter 4 of the Laws of 1891, having determined upon the route or routes and general plan of construction of a rapid transit railway for the convenience and transportation of persons and property to be established in such city, in addition to the already existing lines and having thereupon transmitted to the common council of the

city of New York a copy of said plans and conclusions as adopted, which plans and conclusions thus adopted were received by said common council on the 21st day of October, 1891, at 1 o'clock p. m., at a meeting of said common council duly convened, on such date, at such hour, and said common council having by resolution duly adopted at said meeting, appointed a day, not less than one week nor more than 10 days after the receipt of such plans and conclusions for the consideration thereof, to wit; the 28th day of October, 1891, at 2 o'clock p. m., and said common council on such day so fixed, having proceeded to the consideration of such plans and conclusions and having on said 28th day of October adopted a resolution, of which the following is a copy:

Resolved, That the common council of the city of New York do hereby approve such plans and conclusions and do hereby consent to the construction of a railway or railways in accordance therewith, the route or routes and general plan of construction of a railway, the plans and conclusions for which are hereby approved in accordance with the provisions of section 5 of chapter 4 of the Laws of 1891, and to the construction of which the mayor, aldermen, and commonallity hereby consent, is as follows:

A route, the center line, commencing at a point under the westerly side of Whitehall street, distant along the same 62.5 feet north from the northerly line of South street produced; thence by diverging lines under Whitehall street and Battery park and State street respectively, forming a loop line, the tracks converging to parallelism at a point under Broadway, between Bowling street: thence under Broadway Green and Morris Union square to Fifty-ninth street; thence under the Boulevard to One Hundred and Twenty-first street; thence by viaduct to One Hundred and Thirty-fourth street; thence under the Boulevard to the south line of One Hundred and Fifty-sixth street; thence by viaduct to the north line of One Hundred and Fifty-ninth street; thence under the Boulevard to One Hundred and Ninetieth street; thence under Eleventh avenue to a point 1,460 feet north of the center line of One Hundred and Ninetieth street; thence by a viaduct on

the same straight line produced to a point 442 feet north from the intersection of said straight line with the center line of Kingsbridge road; thence to the right on a curve with the radius of 1,910 feet and in a tunnel a distance of 860.6 feet; thence by a tangent 138 feet in tunnel and a distance of 510.6 feet by viaduct to a point on a line coincident with the center line of Audubon avenue produced across the government ship canal, and thence by the same tangent and indepressed structure 670 feet; thence on the same tangent and by viaduct to and across Spuyten Duyvil creek; and thence on the same tangent by viaduct and indepressed structure and tunnel, as the contour of the lands may acquire to a point 100 feet north of the center line of Delafield's lane; thence to the left on a curve with a radius of 1,910 feet to a point 30 feet south from the center of Delafield's old lane; thence by a tangent to a point 112.4 feet south from the south line of Rock street; thence to the right by a curve with the radius of 500 feet for a distance of 220.8 feet to a point in the center line of Forest street 112.4 feet north of the south line of Rock street; thence by tangent coincident with the center line of Forest street to the city limits.

Also, a loop from Broadway, under Mail street, City Hall park, Park row, and Chambers street, and again connecting with the Broadway line.

Also, a route, the center line diverging from the Broadway line at or near Fourteenth street, running under Union square to Fourth avenue; thence under Fourth and Park avenues to a point 112.15 feet north from the north line of Fortieth street; thence to the left on a curve with the radius of 250 feet for a distance of 154.55 feet; thence by a tangent a distance of 292.18 feet to a point 40.1 feet north from the south line of Forty-second street and 215.7 feet west from the center line of Fourth avenue; thence to the right on a curve with the radius of 250 feet a distance of 124.23 feet; thence by tangent 46.39 feet; thence to the left on a curve with a radius of 250 feet a distance of 182.37 feet to a point 4.4 feet north from the north line of Forty-third street and 159.5 feet east from the center line of Madison avenue; thence by tangent 39.53 feet; thence to the right on a curve with a radius of

400 feet a distance of 332.28 feet to a point in the center line of the center line of Madison avenue 65.6 feet north from the north line of Forty-fourth street; thence under Madison avenue to the south line of Ninety-sixth street; thence to the right on a curve with the radius of 400 feet for a distance of 240.07 feet; thence by tangent a distance of 132.98 feet; thence to the left on a curve with a radius of 400 feet a distance of 240.07 feet to the south line of Ninety-eighth street at a point distant 175 feet east from the easterly line of Madison avenue; the center line distant 175 feet east from the easterly line thereof, across streets and private property to a point 124.6 feet north from the north line of One Hundred and Thirty-fourth street, and distant 175 feet east from the easterly line of Madison avenue; thence to the right on a curve with a a radius of 357.15 feet a distance of 408.6 feet to a point on the west line of River street 54 feet 11 inches south from the south line of One Hundred and Thirty-sixth street; thence by tangent across the Harlem river a distance of 400 feet; thence to the left on a curve to the south line of One Hundred and Thirty-eighth street, at its intersection with the center line of Walton avenue, as the same is laid down upon the topographical maps of the Twentythird and twenty-fourth wards of the city of New York, issued from the office of commissioner of street improvements of the Twenty-third and Twenty-fourth wards; thence, according to said maps, by viaduct depressed structure, and tunnel, as the contour of the land may require along the line of Walton avenue to Stebbens place; thence to the intersection of the center lines of Sylvan avenue and Belmont place; thence along the line of Sylvan avenue to its terminus at Orchard street; thence in a straight line to the center line of Berrian avenue to the southerly point thereof; thence along the center line of Berrian avenue to the southerly point thereof; thence along the center line of Berrian avenue at First street; thence in a straight line to the intersection of the center line of Kirkside avenue and Croton avenue; thence along Kirkside avenue to Travers street, and thence by straight line to and under Jerome avenue to the north line thereof.

The general plan of construction of the look under Battery park,

State and Whitehall streets shall be double tracks, from Morris street junction to near Vesey street shall be three parallel tracks on the same level, with suitable switches and connections between them; from Vesey street to One Hundred and Ninetieth street on the west side line shall be four parallel tracks on the same level; and thence across the Government ship canal and Spuyten Duyvil creek to the city limits shall be two parallel tracks on the same land. On the east side line, from Fourteenth street to the Harlem river, shall be four parallel tracks on the same level, and thence to the city limit shall be two parallel tracks on the same level. nel shall not be less than 11 feet 6 inches in height in the clear, and 11 feet in width for each track. Whenever necessary for the proper support on the surface of the street, the roof of the tunnel shall be of iron girders with solid plate iron covering supported by suitable iron columns between each of the tracks, and supporting walls on the outside. The roof of the tunnel shall be as near the surface of the street as the pipes and underground structure now laid therein and the street grades will permit. Viaducts shall be masonry or iron, or both combined. The Government Ship canal and the Harlem river shall be crossed by double track drawbridges not less than 50 feet in the clear above mean highwater mark, with clear spans of not less than 125 feet between the center piers and the bulkhead line. North of the Harlem river the construction shall be by viaduct, depressed structure and tunnel as the grades of the land upon the proposed routes shall The junction of the tracks near Fourteenth street shall require. be effected by dividing them around Union square, raising one pair and depressing the other so that trains going in the opposite direction shall not cross on the same level. All station approaches shall be as far as possible through private property to be acquired for that purpose, except that on the Boulevard, station approaches may be in the center of the street.

A footway shall be provided the whole length of the line between the center tracks and refuge niches shall be built in the sidewalls at proper intervals for the convenience and protection of employes.

The motive power shall be electricity, or some other power not requiring combustion within the tunnel, and the motor or motors shall be capable of uniform speed for long distances of not less than 40 miles per hour, exclusive of stops.

The manner of construction from South Ferry to about Thirty-fourth street shall be by underground tunneling without disturbing the surface of the street. In case of necessity the excavation below Beaver street, and in the neighborhood of Canal street, and at such other special points as this commission may, during the progress of the work, determine, may be made by excavation from the street surface and all excavations in Fourth avenue above Fourteenth street and in all other streets and avenues above Thirty-fourth street may be made in the same manner; and,

Whereas, The Mayor of the city of New York thereafter approved such resolution of the common council; and,

Whereas, It is provided by section 5 of chapter 4, of the Laws of 1891, that where in any city a line of rapid transit may be laid and in accordance with the provision of such act, the exclusive control of any street, road, highway or avenue, which is to be used or occupied by any railway or railways constructed under the provision of such act, is by law vested in any local authority other than the common council of such city, the approval of the aforesaid plans and conclusions and the consent to the construction of such railway thereunder, shall be given by such local authority in place of and if required, in addition to such approval and consent by said common council and with like effect; and,

Whereas, The said board of Rapid Transit Railroad Commissioners in and for the city of New York have transmitted to me, Lewis J. Hintz, commissioner of street improvements of the Twenty-third and Twenty-fourth wards of the city of New York, a duplicate of the report made as aforesaid to the common council of the city of New York;

Now, therefore, I, said Lewis J. Hintz, commissioner, as afore-

said, do hereby approve such plans and conclusions and do hereby consent to the construction of a railway or railways in accordance therewith.

Witness my hand and seal, this 20th day of November, 1891.

[L. s.] LOUIS J. HINTZ. Witness, John Osborne, Jr.

And, whereas, Upon obtaining the approval and consent of the local authorities as required in and by said act as above set forth, the said board of Rapid Transit Railroad Commissioners did proceed, in good faith, to obtain the consent of the property owners along the line of the route or routes of the proposed railroad as determined by said board in the manner provided in said act, but after diligent efforts to obtain such consents, was unable to procure the same, the owners of more than one-half in value, ascertained as in said act, provided, of the property bounded on said route or routes having refused their consents,

And, whereas, Said board of Rapid Transit Railroad Commissioners did thereupon in its own name by petition, bearing the date the 14th day of January, 1892, make application in writing to the General Term of the Supreme Court of the State of New York in and for the first judicial district, for the appointment of three commissioners to determine and report, after due hearing, whether such railway ought to be constructed and operated, two weeks' previous notice of which said application was duly given by daily publication thereof in more than six daily newspapers published in the city of New York, designated by said General Term for such purpose on application of said board of Rapid Transit Railroad Commissioners.

And, whereas, On the day whereof notice was so given as that upon which such application was to be made, such proceedings were duly had by and before said General Term of the Supreme Court, that upon due proof of the publication of such notice an order was duly made and entered upon such application on April 14, 1892, whereby David McClure, Robert McClay and Benjamin

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Perkins, of the city of New York, three disinterested persons, were duly appointed by said General Term pursuant to said act, to determine whether such railway or railways ought to be constructed and operated; in and by which said order it was further provided that said commissioners, within ten days after their appointment, should designate a place within the city of New York, and a time not less than ten or more than fifteen days thereafter when they would hold their first sitting to proceed with the duties devolving upon them by their said appointment; that notice of the time and place of the first hearing by said commissioners be given by publication for five days, Sundays excepted, immediately preceding said hearing in the following newspapers published in the city of New York, to wit: The New York Law Journal, the New York Herald, the Sun, the New York Daily News, the World, the New York Tribune, the New York Times and the Evening Post; that when, after public hearing of all parties interested, said commissioners should have made their determination of the matters referred to them, they should report to the court the evidence taken, together with the report of their determination whether such road ought to be constructed and operated, and that the petitioner, by its counsel, might present the said report to the General Term of said court for confirmation upon any day when said court should be in session, provided it shall have served at least eight days previous to such application a copy of said report and notice of motion for the confirmation thereof upon all persons who should have appeared therein before the commissioners appointed under said order, and filed with said commissioners or with John M. Bowers, the attorney for said board of Rapid Transit Railroad Commissioners, a notice of appearance by attorneys specifying the office address where papers in said proceedings might be served.

And, whereas, Said commissioners so appointed under said order having duly qualified and taken the oath required by law, did thereupon pursuant to said order, appoint a time not less than ten nor more than fifteen days thereafter, and a place within said city when and where they would hold their first sitting to proceed with

the duties devolved upon them, whereof notice by publication was duly given, as provided in and by said order, and did meet at said time and place and give due hearing to all parties interested in said matter and did thereupon determine that such portion, hereinafter described of the railroad whereof the routes and general plan of construction had been so adopted as above recited by said board of Rapid Transit Railroad Commissioners, ought to be constructed and operated, namely:

A route, the center line commencing at a point under the westerly side of Whitehall street, distance along the same 62.5 feet north from the northerly line of South street produced; thence by diverging lines under Whitehall street and Battery park and State street respectively, forming a loop line, the tracks converging to parallelism at a point under Broadway between Bowling Green and Morris street; thence under Broadway and Union Square to Fifty-ninth street; thence under the Boulevard to One Hundred and Twenty-first street; thence by viaduct to One Hundred and Thirty-fourth street; thence under the Boulevard to the south line of One Hundred and Fifty-sixth street; thence under the Boulevard to One Hundred and Sixty-ninth street; thence under Eleventh avenue to a point 1,460 feet north of the center line of One Hundred and Ninetieth street; thence by a viaduct on the same straight line, produced to a point 442 feet north from the intersection of said straight line with a center line of the Kingsbridge road; thence to the right on a curve with a radius of 1,910 feet, and in a tunnel, a distance of 860.6 feet; thence by tangent 138 feet; thence by curve to the left with a radius of 1.910 feet. a distance of 350 feet in tunnel, and a distance of 510.6 feet by viaduct, to a point on a line coincident with the center line of Audubon avenue, produced and distant 425 feet north from the center line of Two Hundred and Seventeenth street; thence by viaduct and on a tangent coincident with the center line of Audubon avenue produced across the Government Ship canal and thence by the same tangent and in depressed structure 670 feet; thence on the same tangent and by viaduct to and across Spuyten Duyvil creek, and thence on the same tangent by viaduct depressed structure and tunnel as the contour of the land may require to a point 100 feet north of the center line of Delafield lane; thence to the left on the curve with a radius of 1,910 feet to a point 30 feet south from the center line of Delafield's old lane; thence by a tangent to a point 112.4 feet south from the south line of Rock street; thence to the right by a curve, with a radius of 500 feet, for a distance of 220.8 feet to a point in the center line of Forest street 112.4 feet north of the south line of Rock street; thence by tangent coincident with the center' line of Forest street to the city limits.

Also a loop from Broadway, under Mail street, City Hall park, Park row and Chambers street, and again connecting with the Broadway Line.

Also a branch route, the center line diverging from the Broadway Line at or near Fourteenth street running under Union square to Fourth avenue; thence under Fourth and Park avenues to a point 112.15 feet north from the north line of Fortieth street; thence to the left on a curve with a radius of 250 feet for a distance of 154.55 feet; thence by tangent a distance of 292.18 feet to a point 40.1 feet north from the south line of Fifty-second street and 215.7 feet west from the center line of Fourth avenue; thence to the right on a curve with a radius of 250 feet a distance of 124.23 feet; thence by tangent 46.39 feet; thence to the left on a curve with a radius of 250 feet a distance of 187.37 feet to a point 4.4 feet north from the north line of Forty-third street and 159.5 feet east from the center line of Madison avenue.

The general plan of construction of the loop under Battery Park, State and Whitehall streets shall be double track; from the Morris street junction to near Vesey street shall be three parallel tracks on the same level with suitable switches and connections between them; from Vesey street to One Hundred and Ninetieth street on the west side line shall be four parallel tracks on the same level; and thence across the Government Ship canal and Spuyten Duyvil creek to the city limits shall be two parallel tracks on the same level. On the east side line from Fourteenth street to the termination of the block between Forty-third and Forty-

fourth streets and Vanderbilt and Madison avenues shall be four parallel tracks on the same level. The tunnels shall be not less than 11 feet 6 inches in height in the clear, and 11 feet in width for each track. Whenever necessary for the proper support of the surface of the street, the roof of the tunnel shall be of iron girders with solid plate iron covers supported by suitable iron columns between each of the tracks, and supporting the walls on the outside. The roof of the tunnel shall be as near the surface of the street as the pipes and underground structures now laid therein and the street grades will permit. Viaducts shall be of masonry or iron, or both combined. The Government Ship canal and the Harlem river shall be crossed by double track drawbridges not less than 50 feet in the clear above spans high water mark, with clear \mathbf{of} 125 feet between the center piers and the bulkhead line. North of the Harlem river the construction shall be by viaduct, depressed structure, and tunnel as the grades of the land upon the proposed routes shall require. The junction of the track near Fourteenth street shall be effected by dividing them around Union square, raising one pair and depressing the other, so that trains going in the opposite direction shall not cross on the same level. All station approaches shall be as far as possible through private property to be acquired for that purpose, except that on the Boulevard, station approaches may be in the center of the street.

A footway shall be provided the whole length of the line between the center tracks, and refuge niches shall be built in the side walls at proper intervals, for the convenience and protection of employes. The motive power shall be electricity or some other power not requiring combustion within the tunnel; and the motor or motors shall be capable of a uniform speed for long distances of not less than 40 miles per hour, exclusive-of stops.

The manner of construction from South ferry to about Thirtyfourth street shall be by underground tunneling without disturbing the surface of the street. In case of necessity the excavation below Beaver street, and in the neighborhood of Canal street, and at such other special points as the Board of Rapid Transit Railroad Commissioners may, during the progress of the work, determine, may be made by excavation from street surface, and all excavations in Fourth avenue above Fourteenth street, and in all other streets and avenues above Thirty-fourth street may be made in the same manner; and

Whereas, Said commissioners appointed under said order did duly make report in writing to said General Term of the Supreme Court, bearing date the 16th day of June, 1892, of their said determination, and of the evidence taken by them, which said report was duly presented to said General Term of the Supreme Court, and a motion duly made on behalf of said board of Rapid Transit Railroad Commissioners to confirm the same, on due notice to all who were entitled to notice of such motion, whereupon an order was duly made by said General Term, bearing date on the 7th day of July, 1892, and duly entered, confirming said report, and further ordering that the said report of said commissioners that the railway, as described in said report ought to be constructed and operated, having been so confirmed by said court, to be taken in lieu of the consent of the property owners along the line of the route described in said report.

And, whereas, Said board of Rapid Transit Railroad Commissioners did thereafter, and on the 12th day of November, 1892, proceed to prepare and duly adopted detailed plans and specifications for the construction of such railways as follows:

DETAILED PLANS AND SPECIFICATIONS.

The work to be done is the construction of a rapid transit railway for the conveyance of persons and property in the city of New York, the center line commencing at a point under the westerly side of Whitehall street, distant along the same 62.5 feet north from the northerly line of South street produced; thence by diverging lines under Whitehall street and Battery park and State street, respectively, forming a loop line, the tracks converging to parallelism at a point under Broadway, between Bowling, Green and Morris street; thence under Broadway and Union

square to Fifty-ninth street; thence under the Boulevard to One Hundred and Twenty-first street; thence by viaduct to One Hundred and Thirty-fourth street; thence under the Boulevard to the south line of One Hundred and Fifty-sixth street; thence by viaduct to the north line of One Hundred and Fifty-ninth street; thence under the Boulevard to One Hundred and Sixty-ninth street; thence under Eleventh avenue to a point 1,460 feet north of the center line of One Hundred and Ninetieth street; thence by a viaduct on the same straight line produced to a point 442 feet north from the intersection of said straight line with the center line of the Kingsbridge road; thence to the right on a curve at a radius of 1.910 feet, and in tunnel a distance of 860.6 feet; thence by tangent 13.8 feet; thence by curve to the left with a radius of 1,910 feet, a distance of 350 feet in tunnel and a distance of 510.6 feet by viaduct, to a point on a line coincident with the center line of Audubon avenue produced and distant 425 feet north from the center line of Two Hundred and Seventeenth street; thence by viaduct and on a tangent coincident with the center line of Audubon avenue produced, across the Government Ship canal, and thence by the same tangent and in depressed structure 627 feet; thence on the same tangent and by viaduct, through and across Spuvten Duyvil creek; and thence on the same tangent by viaduct, depressed structure and tunnel as the contour of the land may require to a point 100 feet north of the center line of Delafield lane: thence to the left on a curve with a radius of 1,910 feet, to a point 30 feet south from the center line of Delafield old lane; thence by a tangent to a point 112.4 feet south from the south line of Rock street; thence to the right by a curve with a radius of 500 feet for a distance of 220.8 feet, to a point in the center line of Forest street, 112.4 feet north of the south line of Rock street; thence by a tangent, coincident with the center line of Forest street to the city limits.

Also a loop from Broadway, under Mail street, City Hall park, Park row and Chambers street, and again connecting with the Broadway line.

Also a branch route, the center line diverging from the Broad-

way line at or near Fourteenth street, running under Union square to Fourth avenue; thence under Fourth and Park avenues to a point 112.15 feet north from the north line of Fortieth street; thence to the left on a curve with a radius of 250 feet for a distance of 154.55 feet; thence by tangent a distance of 292.18 feet to a point 40.1 feet north from the south line of Forty-second street, and 215.7 feet west from the center line of Fourth avenue; thence to the right upon a curve with a radius of 250 feet, a distance of 124.23 feet; thence by tangent 46.39 feet; thence to the left on a curve with a radius of 250 feet a distance of 182.32 feet to a point 4.4 feet north, from the north line of Forty-third street, and 159.5 feet east from the center line of Madison avenue.

The general plan of construction of the loop under Battery park, State and Whitehall streets, and up to the northerly side of Bowling Green, will be double track on the same level; thence to a point near Vesey street there will be three parallel tracks on the same level; thence to One Hundred and Ninetieth street on the West Side line there will be four parallel tracks on the same level; and thence to the city limit there will be two parallel tracks on the same level.

On the east side branch route from Fourteenth street to the termination in the block betwen Forty-third and Forty-fourth streets and Vanderbilt and Madison avenues there will be four parallel tracks on the same level.

Stations upon the Broadway and Boulevard lines shall be located at the following points, viz.: At Battery park, at Wall and Rector streets; at Maiden Lane and Cortlandt street; at New York and Brooklyn bridge; at Chambers street; at White street; at Grand street; at Bleecker street; at Eighth street; at Fourteenth street; at Twenty-third street; at Twenty-ninth street; at Thirty-fourth street; at Forty-second street; at Fiftieth street; at Sixtieth street; at Seventy-second street; at Seventy-ninth street; at Eighty-sixth street; at Ninety-seventh street; at One Hundred and Tenth street; at One Hundred and Twenty-second street; at Manhattan street; at One Hundred and Thirty-fifth street; and One Hundred and Forty-fifth street; at One Hundred and Fifty-sixth

street; at One Hundred and Sixty-ninth street; at One Hundred and Eighty-firts street; at Fort George; at Kingsbridge road and Isham street; at Two Hundred and Twentieth street; at Riverdale avenue; at Spuyten Duyvil parkway; at Riverdale lane; at Stewart's lane.

The stations at Chambers street; at Fourteenth street; at Twenty-third street; at Forty-third street; at Sixtieth street; at Eighty-sixth street; at Manhattan street; at One Hundred and Sixty-ninth street; at One Hundred and Eighty-first street, and at Fort George, shall be for both local and express trains, and the other stations for local trains only.

Stations shall be located upon the Fourth avenue line at the following points, viz.: At Twenty-third street; at Thirty-second street, and at Forty-second street.

The station at Forty-second street shall be for both local and express trains, and the stations at Twenty-third street and Thirty-second for local trains only.

At frequent points along the whole line the main tracks must be connected by connecting tracks with suitable switching arrangements, the location of these cross-overs must be such as shall be approved by the Rapid Transit Commission.

One or more footways must be provided for the whole length of all the lines and in the depressed tunnel and tunnel portions, refuge niches must be built in the side walls; the location at each point, the width and details of construction of these footways and refuge niches must be such as shall be approved by the said commission.

Maps, profiles and drawings, a list of which is appended hereto, are exhibited in connection with these specifications, and form a part thereof.

The maps show the route of railway as above described, with the proposed location of the several stations. The profiles accompanying the maps show the proposed grades for the railway.

The drawings show the typical forms adopted by the Rapid Transit Railroad Commission for the construction of the proposed railway. They indicate the general details of construction applicable at the different portions of the route.

The manner of construction from South Ferry to about Thirty-fourth street, along the line of Broadway, and in Park avenue above Thirty-fourth street, shall be by underground tunneling, without disturbing the surface of the street. In case of necessity the excavations below Beaver street, and in the neighborhood of Canal street and at such other special points as this commission may, during the progress of the work, determine, may be made by excavation from the street surface, and all excavations in Fourth avenue below Thirty-fourth street and in all other streets and avenues above Thirty-fourth street may be made in the same manner.

The method of construction of the portion of the railway under Battery park, State and Whitehall streets and up to the northerly side of Bowling Green is shown by accompanying Exhibit No. 5.

The material underneath the roadbed and extending from side wall to side wall shall be hydraulic concrete. The side walls shall be of stone masonry, faced with brick. The columns, girders and beams shall be of steel, the roof arches shall be of brick. The water-proofing protection shall be of asphalted composition.

The method of construction of the portion of the railway under Broadway from the northerly side of Bowling Green to a point near Vesey street is shown by accompanying drawing — Exhibit No. 6. The side walls shall be of stone masonry, faced with brick. The columns, girders and beams shall be of steel. The roof arches shall be of brick.

The method of construction of the portion of the railway under Broadway from a point near Vesey street to a point near Sixtieth street is shown by accompanying drawing — Exhibit No. 7. The side walls shall be of stone masonry, faced with brick; the columns, girders and beams shall be of steel. The roof arches shall be of brick.

The method of construction of the railway where the loop at City Hall park leaves the main line is shown by accompanying drawing — Exhibit No. 8. The side walls shall be of stone masonry. The girders and beams shall be of steel.

The method of construction of the portion of the railway under the Boulevard from the point near Sixtieth street to a point near One Hundred and Eighth street is shown by accompanying drawing — Exhibit No. 9. The side walls shall be of stone masonry, faced with brick. The columns, girders and beams shall be of steel. The roof arches shall be of brick.

The method of construction of the railway under the Boulevard from a point near One Hundred and Eighth street to a point near One Hundred and Twenty-first street is shown by accompanying drawing — Exhibit No. 10. The side walls shall be of stone masonry, faced with brick. The columns, girders and beams shall be of steel. The roof arches shall be of brick. The same method of construction applies to the portion of railway under the Boulevard from a point near One Hundred and Thirty-fifth street to a point near One Hundred and Fifty-fifth street; also from a point near One Hundred and Sixtieth street to a point near One Hundred and Seventy-eighth street to a point near One Hundred and Eighty-fifth street.

The method of construction of the portion of the railway from a point near One Hundred and Twenty-first street to a point near One Hundred and Twenty-third street is shown by accompanying drawing — Exhibit No. 12, figure 1. The side walls shall be of stone masonry. The same method of construction applies to the portion of the railway from a point near One Hundred and Thirty-fourth street to a point near One Hundred and Thirty-fifth street.

The same method of construction of the portion of the railway from a point near One Hundred and Twenty-third street to a point near One Hundred and Thirty-fourth street to a point near One Hundred and Thirty-fifth street.

The method of construction of the portion of the railway from a point near One Hundred and Twenty-third street to a point near One Hundred and Thirty-fourth street is shown by accompanying drawing — Exhibit No. 13. The columns, girders, trusses and beams shall be of steel; the masonry shall be of stone.

The method of construction of the portion of the railway from a point near One Hundred and Fifty-fifth street to a point near One Hundred and Fifty-sixth street is shown by accompanying drawing — Exhibit No. 12, figure 1. The side walls shall be of stone masonry.

The same method of construction applied to the portion of railway from a point near One Hundred and Fifty-eighth street to a point near One Hundred and Sixtieth street.

The method of construction of the portion of the railway from a point near One Hundred and Fifty-sixth street to a point near One Hundred and Fifty-eighth street is shown by accompanying drawing — Exhibit No. 14. The masonry shall be of stone; the columns, girders, trusses and beams shall be of steel.

The method of construction of the portion of the railway from a point near One Hundred and Sixty-first street to a point near One Hundred and Seventy-eighth street is shown by accompanying drawing — Exhibit No. 15, figure 1. The side walls shall be of stone masonry; the arches shall be of brick.

The same method of construction applies to the portion of the railway from a point near One Hundred and Eighty-fifth street to One Hundred and Ninetieth street. The method of construction of the portion of the railway from One Hundred and Ninetieth street to the point marked "A," on the profile, upon Exhibit No. 3, is shown by accompanying drawing — Exhibit No. 15, figure 3. The side walls shall be of stone masonry; the arches shall be of brick. The same method of construction applies to the portion of the railway from a point marked "F," on Exhibit No. 3, to a point marked "G," on same exhibit; also to the portion between the point marked "R" and "S" and on same exhibit; also to the portion between the points marked "Z" and "AA" on same exhibit; also to the portion between the points marked "BB" and "EE" on same exhibit.

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The method of construction of the portion of the railway from the point marked "A." on Exhibit No. 3, to the point marked "B" on same exhibit is shown by accompanying drawing — Exhibit No. 16, figures 1, 2, 3. Where side walls are requisite for support of material they should be of stone masonry. The same method of construction applies to the portion of the railway between the points marked "E" and "F" on Exhibit No. 3; also to the portion between the points marked "G" and "H" in same exhibit; also to the portion between the points marked "K" and "L" on same exhibit; also to the portion between the points marked "M" and "N" on same exhibit; also to the portion between the points marked "Q" and "R" on same exhibit, also to the portion between the points marked "S" and "T" on same exhibit; also to the portion between the points marked "U" and "V" on same exhibit; also to the portion between the points marked "W" and "X" on same exhibit; also to the portion between the points marked "Y" and "Z" on same exhibit; also to the portion between the points marked "AA" and "BB" on same exhibit; also to the portion between the points marked "CC" and "DD" on same exhibit; also to the portion between the points marked "EE" and "FF" on same exhibit; also to the portion between the points marked "II" and "JJ" on same exhibit.

The method of construction of the portion of the railway from the point marked "L," on Exhibit No. 3, to the point marked "M," on same exhibit, is shown by accompanying drawing — Exhibit No. 19, figure 2. The side walls shall be of stone masonry. The girders and beams shall be of steel. The roof arches shall be of brick.

The method of construction of the portion of railway from the point marked "B," on Exhibit No. 3, to the point marked "C," on same exhibit, is shown by accompanying drawing — Exhibit No. 16, figures 4, 5 and 8.

Where side walls are required for support of material they shall be of stone masonry. The method of construction applies to the portion of railway between the points marked "D" and "E" on same exhibit; also to the portion between the points marked "J"

and "K" on same exhibit; also to the portion between the points marked "N" and "O" on same exhibit; also to the portion between the points marked "P" and "Q" on same exhibit; also to the portion between the points marked "T" and "U" on same exhibit; also to the portion between the points marked "X" and "Y" on same exhibit; also to the portion between the points marked "BB" and "CC" on same exhibit; also to the portion between the points marked "FF" and "GG" on same exhibit; also to the portion between the points marked "HH" and "H" on same exhibit.

The method of construction of the portion of the railway from the point marked "C," on Exhibit No. 3, to the point marked "B," on same exhibit, is shown by accompanying drawing, Exhibit No. 17. The columns, girders, trusses and beams shall be of steel.

The method of construction of the portion of the railway over the Harlem River Ship canal, from the point marked "I," on Exhibit No. 3, to the point marked "J," on same exhibit, shall be as shown on accompanying drawing — Exhibit No. 18 — drawbridge over Harlem River Ship canal. The abutments and piers shall be of stone masonry; the superstructure shall be of iron and steel. The method of construction of the portion of the railway from a point marked "O," on Exhibit No. 3, to the point marked "P," on the same exhibit, is shown by Exhibit No. 19, figures 1 and 3. The columns, girders, trusses and beams shall be of steel.

The method of construction of the portion of the railway from the point marked "GG," on Exhibit No. 3, to the point marked "HH," on the same exhibit, is shown by accompanying drawing — Exhibit No. 20. The columns, girders, trusses and beams shall be of steel.

The method of construction of the branch route on Fourth avenue from Union square to a point near Thirty-third street, is shown by accompanying drawing — Exhibit No. 10. The columns, girders and beams shall be of steel. The roof arches shall be of brick. The side walls shall be of stone masonry, faced with brick.

The method of construction of the portion of the railway under

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Park avenue, north of Thirty-third street, is shown by accompanying drawing — Exhibit No. 11. The columns, girders and beams shall be of steel. The roof arches shall be of brick. The side walls shall be of stone masonry, faced with brick.

Working drawings for construction at each point which the company desires to adopt must be, from time to time, presented for the consideration of the Rapid Transit Railroad Commission, and, as far as consistent with the requirements of the law, the method of construction will be as desired by the company, always, however, being subject to the approval of the said commission.

The details, therefore, shown by the accompanying plans and referred to in these specifications, are subject to the above provision, provided always that the plans and specifications, as so modified, do not change the route or routes of the said railway, and be not inconsistent with the general plan of construction which has been adopted by the said commission in accordance with the provisions of law.

At every point of the route precaution shall be taken to prevent danger to persons and damage to buildings and structures during the progress of construction of the railroad. Where the excavations are to be of such depth and proximity to any building or structure as to endanger its stability, suitable provisions must be made and applied, either before the beginning of construction or during its progress, as may be requisite to secure such stability and prevent any damage. Such provisions shall include the shoring up of buildings or structures, and the construction of new foundations wherever such measures may be necessary to properly secure and protect property adjacent to the railroads.

At every point where the construction of a railway interferes with, disturbs or endangers any sewers, water-pipes, gas-pipes or other duly authorized sub-surface structure, the work of construction at such points shall be conducted in accordance with the reasonable requirements and under the supervision of the Commissioner of Public Works of the City of New York.

At every point where the proper construction of the railway,

in accordance with the route and plans approved by the Rapid Transit Railroad Commission requires a change in any sewer, water-pipe, gas-pipe or other duly authorized sub-surface structure, such change shall be made in accordance with plans and methods that may be approved by the commissioner of public works and under his supervision. Such changes shall include the relaying, where required, of such sewers, pipes or other duly authorized sub-surface structures, and shall also include, furnish and newly construct all sewers, pipes or other sub-surface structures that may be necessary to provide for proper connections and uses in accordance with such approved plans. Where necessary for such connections and uses in accordance with such plans, specia! provisions and constructions shall be made for passing such sewers, pipes and other said sub-surface structures under or over the rapid-transit railway, or for otherwise making their required connections.

All changes and reconstructons connected with said subsurface structures shall be made at such times with regard to the progress of the work as the Rapid Transit Railroad Commissioners may direct.

All expenses incidental to the supervision of all such work and also the expenses of the work of reconstructing, readjusting and supporting any such sewers, water-pipe, gas-pipe or other duly authorized sub-surface structures, and the expenses of the work of new or special constructions, as above specified, shall be borne and paid by the company constructing the said railroad.

Wherever the surface of any street or avenue may be disturbed in the progress of the work done by the company constructing the railway, provision shall be made for temporary passageways and roadways, which shall be constructed and maintained so that travel in the streets and avenues shall not be obstructed more than absolutely necessary. Such provisions shall be made under the direction of the Rapid Transit Railroad Commission and under the inspection of the Commissioners of Public Works, and in accordance with plans and methods to be approved by said commissioner. All expenses of construction and maintaining

such temporary passageways or roadways, and also of the inspection above specified, shall be borne and paid by the company constructing the said railway.

Wherever the street pavement is disturbed or removed by the company constructing the railway, such pavement shall be restored without delay, and shall be relaid in accordance with and in conformity to the requirements of the specifications of the Commissioner of Public Works applicable to the construction of pavements of the character of that disturbed or removed at each point and material excavated during the construction of the railroad must be promptly removed and disposed of without unnecessary hindrance to existing street traffic. The method and times of said removal and the disposal of said material shall be strictly according to the regulation prescribed by the Rapid Transit Railroad Commission for the different parts of the route. The location of shafts and other methods of access to the work shall be approved by the said commission.

The use of explosives shall conform to the ordinance of the city of New York and to regulations to be imposed for each location by the Rapid Transit Railroad Commission, and special precaution shall be taken with regard to prevention of injuries to persons or property.

In computing the strength required for the support to sustain the ground and street over the depressed portion of the railroad, the weight to be supported shall be estimated as follows:

- 1. The weight of the soil and pavement.
- 2. The weight of all pipes and other structures beneath or on the surface.
 - 3. The weight of the roof over the railway.
- 4. A live load on the surface of the street equal to 1,500 pounds per square foot of surface.

But in no case shall a total load of less than 1,500 per square foot of surface be assumed.

. All elevated or viaduct structures intended to support strains of this railway shall be so designed and proportioned as to sus-

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tain the weight of the structure itself, a proper wind pressure and a train or moving load as great as that used in designing and proportioning similar structures on first-class standard gauge passenger railways.

All steel, iron, masonry, brick work, concrete and all other materials which are used in construction shall be proportioned to resist such unit strains as are proper and sufficient, according to the description and location of the several parts and their constituent material, and the amount, kind and nature of the strains to which they may be subjected, always, however, subject to the approval of the engineer of the Rapid Transit Railroad Commission.

The details for and materials and method of construction of all foundations, walls, arches and other portions of the work shall be such as in each case to assure stable construction of a permanent and proper character, and in each detail shall be in conformity with plans to be approved by the Rapid Transit Railroad Commission.

Provisions must be made for the protection of all portions of the depressed structure from inflow of water at portions of the route where the depth is such as to render the inflow probable, special arrangements and details of construction must be adopted in all respects to be approved by said commission.

Along all parts of the tunnel there shall be constructed drains of suitable material and proper size leading to pumps. At such pumps, pumping plants shall be constructed of capacity large enough to raise the water into the sewers. The size, location and method of construction of the drains and pumps shall be as approved by the said commission. The method of making the connection with the sewers and the selection of particular sewers to be used shall be directed by the said commission after approval by the Commission of Public Works.

The rails shall be of weight and character to be approved by the said commission, and shall weigh not less than 75 pounds per lineal yard, and there shall be provided approved guard-timbers or guard-rails at every portion of the route. The ties, the ballast No. 98.]

and the method of constructing the permanent way in all details shall be of the best description for the transportation of the traffic, and in all respects in accordance with plans to be approved by the said commission.

The switches and cross-over arrangement shall be of the best description, applicable at each point, and in accordance with plans approved by the said commission, both as to their construction and method of operation.

The best and most efficient system of blocks, switch and train signals shall be adopted and constructed so as to insure safety of train operation, the plans for such system to be approved by the said commission. A telegraph system, also thus approved, shall be put in place, connecting all passenger and signal stations and such other points as may be necessary for its operation as designed.

Products of combustion must be excluded from the tunnel. A proper and sufficient system of ventilation must be introduced, subject to the approval of the said commission.

The work of construction of this railway shall begin and progress at as many points, and at each point with such speed as shall insure completion of each portion within the time specified by the terms of sale. Should such progress not be made at any point, in the judgment of the said commission, notice thereof shall be served by the commission upon the company constructing the railroad, and the company shall thereupon increase its force or enter upon the work at additional points, or take such other measures as shall, in the opinion of the commission, be required to insure the said completion within the required time.

The cars must be propelled by electricity or by some form of power not requiring combustion within a tunnel. The motor must be sufficiently powerful to readily start a train of eight cars, each weighing, in addition to its load of passengers, not less than 30,000 pounds, or a drafient with a rise of one and one-half feet per 100 feet of distance, and the motor must be able to maintain the same train at a speed of not less than 40 miles per hour on a level gradient.

Should each car be provided with its own motor, such motor must be capable of exerting sufficient power to comply for each car with the above requirements.

Full plans, descriptions and specifications of the method of propulsion proposed must be prepared by the company, submitted to the said commission and approved by it before adoption.

Each car must be provided with arrangements for heating, the plans and method for which must be submitted to the said commission and approved by it before adoption.

Each car must be provided with full and proper arrangements for lighting, the plans and method for which must be submitted to the said commission and approved by it before adoption.

Each car must have ample and comfortable seating capacity for the number of passengers to be carried by the car.

All cars must be made in the most substantial manner, and be provided with the best wheels, brakes, trucks and other appliances.

Each station must be provided with suitable waiting and toilet rooms, with all proper conveniences for the use and comfort of passengers, including proper platforms and suitable arrangements for heating and for lighting.

The platforms and stations and the stairways, hallways, galleries, approaches and passages must be of ample size for the accommodation of passengers, and must be provided with full and proper arrangements for lighting every part to be used by passengers and for heating such parts as should be heated.

The size of plaform and approaches and the plans and methods for lighting and heating every point, and the plans for all other details of stations, must be submitted to the commission and approved by it before adoption.

The arrangements for the entrance and egress of passengers, to and from platforms, and to and from cars, must be such as to provide for comfortable and speedy accommodations for passengers to the full extent of the capacity of the railway.

Whenever the vertical and distance between the grade of the street and the station platform exceeds 20 feet, passenger eleva-

tors shall be provided. These must be of sufficient number and of ample capacity, of suitable swift movement and must have all proper arrangements for safety and for convenience of entrance, exit and approach from both the street and the station platform. Full plans and specifications for stations, cars, passengers, platforms and elevators must be made by the company for each point when required, and must be submitted to and approved by the said commission before adoption.

The regulations for operating the road shall in all respects be such as shall be approved by the rapid transit railroad commission.

It is understood that under these plans and specifications a railway is to be built of the best possible construction and having the highest efficiency. The constructing company must, therefore, use materials and provide workmanship of the best quality, and shall, as far as possible, introduce an artistic effect, so that the station, waiting room, platform, cars, columns, girders, roofs, walls and other suitable visible portions shall have a pleasing appearance. All steel, iron, rails, ties, wood, stone, brick, cement, concrete, motor, glass, paint and other materials used in the construction of the railway shall, in their respective way, conform to the best standard of excellence and be subject to tests and inspection approved by the said commission.

The Rapid Transit Railroad Commission shall have supervisory charge of the work during its construction, and at any time during its progress the said commission, their engineers, inspectors or other duly authorized agents shall have full access to all parts of the work, and to the inspection of all materials, delivered, or about to be delivered, which is to be used in the work. Any work which, in the judgment of the Rapid Transit Railroad Commission, is not in accordance with these plans and specifications, or others which may be issued or approved during the progress of work, shall immediately be made good, and all material condemned as unfit for use shall be removed within such time as the Rapid Transit Commission may order. If the constructing company shall use any method of construction which the said

commission shall deem as unsafe, or as not giving the best possible result, the said commission may, in its judgment, order such method stopped or altered, and the constructing company must obey such orders immediately.

Although the said commission will supervise the work of construction, nevertheless such supervision shall not relieve the constructing company for any liability whatsoever.

When, under these specifications, it becomes necessary to notify the constructing company of a failure to comply with these plans and specifications, or such other as may hereafter be issued or approved, it will be considered a sufficient notice to deliver an order addressed to the president, or to any officer, director, agent or other representative of the constructing company, and in event of said company not complying with the terms of said order, then the Rapid Transit Railroad Commission shall proceed to enforce its orders by due process of law.

(List of drawings accompanying these specifications.)

- 1. Map and profile showing route of railway, locations of stations and grade of railway from Battery park along line of Broadway to Fifty-ninth street. Including route of railway, location of station and grade of railway on loop at City Hall park.
- 2. Map and profile showing route of railway, location and station and grade of railway from Fifty-ninth street along line of Boulevard and Eleventh avenue to One Hundred and Ninetieth street.
- 3. Map and profile showing route of railway, location of stations and grade of railway from One Hundred and Ninetieth street to the city limits.
- 4. Map and profile showing route of railway, location of stations and grade of railway on branch route from Fourteenth street under Union square, Fourth and Park avenue to terminus of said branch route 4.4 feet north from the north line of Forty-third street.

Typical section of railway under Battery park, State and Whitehall streets.

- 6. Typical section of railway under Broadway, from a point near Bowling Green to a point near Vesey street.
- 7. Typical section of railway, from a point near Vesey street to a point near Sixtieth street.
- 8. Typical section of railway where loop at City Hall park leaves the main line.
- 9. Typical section of railway under the Boulevard from a point near Sixtieth street to a point near One Hundred and Eighth street.
- 10. Typical section of railway under the Boulevard from a point near One Hundred and Eighth street to a point near One Hundred and Twenty-first street; also from a point near One Hundred and Thirty-fifth street to a point near One Hundred and Fifty-fifth street; also from a point near One Hundred and Fiftieth street to a point near One Hundred and Sixty-first street; also from a point near One Hundred and Seventy-eighth street to a point near One Hundred and Eighty-fifth street; also of railway under Fourth avenue from Union Square to Thirty-third street.
- 11. Typical section of railway under Park avenue north of Thirty-third street.
- 12. Typical section of four-track railways in open depressed way; also in embankments between retaining walls.
 - 13 Viaduct across Manhattan valley. (13A details.)
- 14. Viaduct between One Hundred and Fifty-sixth street and One Hundred and Fifty-eighth street.
 - 15. Four track tunnel; also two track tunnel.
- 16. Sections of two-track railway in open cuttings and in embankments.
 - 17. Sherman Creek viaduct.
 - 18. Drawbridge over Harlem River Ship canal.
 - 19. Viaduct across Spuyten Duyvil valley with approach.
 - 20. Two-track elevated structure.
- 21. Typical longitudinal section of construction of two-track railway across valleys, with provision for street crossing and for drainage.
 - 22. Typical express stations.

- 23. Typical local stations.
- 24. Typical Boulevard station.
- 25. South ferry station.
- 26. City Hall station.
- 27. Manhattan street station.
- 28. Enlarged map Battery park loop.
- 29. Enlarged map City Hall loop.
- 30. Enlarged map Union square junction.

Resolved, That subject to the provisions of chapter 4 of the Laws of 1891, as amended by chapter 752 of the Laws of 1894, this board confirms and adopts, and hereby determines and establishes the portion of the aforesaid route or routes and general plan of construction for a rapid transit railway or railways in the city of New York which were so adopted by said Board of Rapid Transit Railroad Commissioners in and for the city and county of New York, as such board-existed prior to May 22, 1884, and which have been so consented to by said local authorities, in respect to which it was so determined by said commissioners appointed by the General Term of the Supreme Court and by said court constructed and operated, namely:

A route, the center line commencing at a point under the westerly side of Whitehall street, distant along the same 62.5 feet north from the northerly line of South street produced; thence by diverging lines under Whitehall street and Battery park and Str street, respectively, forming a loop line, the tracks convo erging to parallelism at a point under Broadway, between T owling Green: and Morris street; thence under Broadway and Union Square to Fifty-ninth street; thence under the P Loulevard to One Hundred and Twenty-first street; thence ' by viaduct to One Hundred and Thirty-fourth street; thence se under the Boulevard to the south line of One Hundred and Ju Fifty-sixth street; thence by viaduct to the north line of one Hundred and Fifty-ninth street; thence under the Br Julevard to One Hundred and Sixty-ninth street; thence under Eleventh avenue to a point 1,460 feet north of the center line of One Hundred and Ninetieth street; thence by a viaduct

on the same straight line, produced, to a point 442 feet north from the intersection of said straight line with the center line of Kingsbridge road; thence to the right on a curve with a radius of 1,910 feet, and in a tunnel a distance of 806.6 feet; thence by a tangent, 138 feet; thence by a curve to the left with a radius of 1,910 feet, a distance of 350 feet in tunnel, and a distance of 510.6 feet by viaduct, to a point on a line coincident with the center line of Audubon avenue, produced, and distant 425 feet north from the center line of Two Hundred and Seventeenth street; thence by viaduct on a tangent, coincident with the center line of Audubon avenue, produced across the Government Ship canal and thence by the same tangent, and in depressed structure, 670 feet; thence on the same tangent by viaduct to and across Spuyten Duyvil creek; and thence on the same tangent by viaduct, depressed structure and tunnel as the contour of the land may require, to a point 100 feet north of the center line of Delafield lane; thence to the left on a curve with a radius of 1,910 feet to a point 30 feet south from the center line of Delafield's old lane; thence by a tangent to a point 112.4 feet south from the south line of Rock street; thence to the right by a curve, with a raidius of 500 feet, for a distance of 220.08 feet to a point in the center line of Forest street 112.4 feet north of the south line of Rock street; thence by tangent coincident with the center line of Forest street to the city limits.

Also, a loop from Broadway, under Mail street, City Hall park, Park row and Chambers street, and again connecting with Broadway line.

Also, a branch route, the center line, diverging from the Broadway line at or near Fourteenth street, running under Union square to Fourth avenue; thence under Fourth and Park avenues to a point 112.15 feet north from the north line of Fortieth street; thence to the left on a curve with a radius of 250 feet for a distance of 154.55 feet; thence by tangent a distance of 292.18 feet, to a point 40.1 feet north from the south line of Forty-second street, and 215.7 feet west from the center line of Fourth avenue; thence to the right on a curve with a radius of 250 feet, a distance of 124.23 feet; thence by tangent 46.39 feet; thence to the left on a

curve with a radius of 250 feet, a distance of 182.37 feet, to a point 4.4 feet north from the city line of Forty-third street, and 159.5 feet east from the center line of Madison avenue. The general plan of construction of the loop under Battery Park, State and Whitehall streets, shall be double track; from the Morris street junction to near Vesey street shall be three parallel tracks on the same level, with suitable switches and connections between them from Vesev street to One Hundred and Sixty-ninth street, and on the West side line shall be four parallel tracks on the same level; and thence across the Government Ship canal and Spuyten Duyvil creek to the city limits shall be two parallel tracks on the same level; on the East Side lines from Fourteenth street to the termination in the block between Forty-third and Forty-fourth street and Vanderbilt and Madison avenues shall be four parallel tracks on the same level. The tunnels shall not be less than 11 feet 6 inches in height in the clear, and 11 feet in width for each track. Whenever necessary for the proper support of the surface of the street, the roof of the tunnel shall be of iron girders with solid plate iron covering supported by suitable iron columns between each of the tracks, and supporting walls on the outside. The roof of the tunnel shall be as near the surface of the street as the pipes and underground structures now laid therein, and the street grades will permit. Viaducts shall be of masonry or iron, or both combined. Government Ship canal and Harlem river shall be crossed by double track draw bridges, not less than 50 feet in the clear above mean high water mark, with clear spans of not less than 125 feet between the center pier and the bulkhead line. North of the Harlem river the construction shall be by viaduct, depressed structure and tunnel as the grades of the land upon proposed routes shall require. The junction of the tracks near Fourteenth street shall be effected by dividing them under Union square, raising one pair and depressing the other, so that trains going in opposite direction shall not cross on the same level. All station approaches shall be as far as possible through private property to be acquired for that purpose, except that on the Boulevard station approaches may be in the center of the street.

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A footway shall be provided the whole length of the line between the center tracks and refuge niches shall be built in the side walls at proper intervals for the convenience and protection of employes.

The motive power shall be electricity, or some other power not requiring combustion within the tunnel; and the motor or motors shall be capable of uniform speed for long distances of not less than 40 miles per hour, exclusive of stops.

The manner of construction from South ferry to about Thirty-fourth street shall be by underground tunnel, without disturbing the surfact of the street. In case of necessity, the excavations below Beaver street, and in the neighborhood of Canal street, and at such other special points as the Board of Rapid Transit Railroad Commissioners may, during the progress of the work, determine, may be made by excavation from the street surface, and all excavations in Fourth avenue above Fourteenth street, and in all other streets and avenues above Thirty-fourth street, may be made in the same manner.

Resolved, That the detailed plans and specifications as above recited, now before this board, for the construction of such railroad heretofore adopted on the 12th day of November, 1892, by said Board of Rapid Transit Railroad Commissioners, as the same existed prior to May 22, 1894, be and the same hereby are confirmed and adopted by this board, as the detailed plans and specifications for the construction of such railway, subject to the provisions of chapter 4 of the Laws of 1891, as amended by chapter 752 of the Laws of 1894.

Resolved, That a copy of said detailed plans be authenticated by the signatures of the members of this board, and placed on file.

Why We Should and How We Can Own Our Street Railways, Electric Light, Gas and Telephone Systems.

By Professor Frank Parsons.

With the Ce'ebrated Decision in Mandamus Case, During the Recent Strike in Brooklyn, Rendered by Supreme Court Judge, William J. Gaynor, and His Letter to the Board of Mediation and Arbitration, on the Causes of That Strike.

A comparison of city ownership with private ownership; Judge Henry B. Brown and C. J. Buell on the situation; Webster's, Lincoln's and Beecher's prophesies; and a simple, effective plan by which the city of Brooklyn can obtain possession of its street railways.

Speech on Free Labor, Delivered September, 1859.

What Abe Lincoln did say.—"I hold, if the Almighty had ever made a set of men that should do all of the eating and none of the work, he would have made them with mouths only, and no hands; and if he had ever made another class that he had intended should do all the work and none of the eating, he would have made them without mouths and with all hands."

We are Moving with Tremendous Rapidity Towards the Danger Line.

Daniel Webster said: "The freest government can not long endure where the tendency of the law is to create a rapid accumulation of property in the hands of the few." Henry Ward Beecher said in 1881, that "Five or ten men controlling 10,000 miles of railroad and billions of property, would have their hands on the throat of commerce," and "If they should need to have a man in

sympathy with them in the executive chair, it would only require five pockets to put him there." With keen prophetic vision, Lincoln said, at the close of the war: "It has been indeed a trying hour for the Republic; but I see in the near future a crisis approaching that unnerves me, and causes me to tremble for the safety of our country. As a result of the war, corporations have been enthroned, and an era of corruption in high places will follow, and the money power will endeavor to prolong its reign by working on the prejudice of the people, till all wealth is aggregated in a few hands, and the Republic is destroyed. I feel at this moment more anxious for the safety of my country than ever before, even in the midst of the war."

The congestion of wealth is indeed a fatal disease—the heart failure of nations. In the United States to-day, 1 per cent. own more than three-fifths of the wealth of the nation; 4,000 millionaires and multi-millionaires own more than one-fifth, and the billionaire is expected before the end of the century. If the present rate of concentration continues, in 1920 one per cent. of our people will own 95-100 of all our wealth.

We are moving with tremenduous rapidity toward the danger line. Persia perished when one per cent. of the people owned all the land; Egypt went down when two per cent. owned 97-100 of all the wealth; Babylon died when two per cent. owned all the wealth, and Rome expired when 1,800 men possessed the whole world.

Will you help stem the tide, so that your children may enjoy "life, liberty, and the pursuit of happiness?"

THE PEOPLE'S HIGHWAYS.

BY PROF. FRANK PARSONS.

Municipal Highways — Street Čar Lines, Telephones, etc.

What would you think of a two-cent fare on the street cars of our cities? Would it not help the crowded cities to expand, and enable the smothered thousands of the poorer quarters to get out where they might breathe some air that has not been cooked? would it not lower rents in the city, and the price of goods? Would

it not save to the people millions of dollars a year that now go to build up the fortunes of a few monopolists? Certainly it would do all this; but is it possible? Let us see. Fortunately we are not left in doubt — there is expert testimony in the case. Works of the highest authority on the construction and operations of electric railways tell us that the average cost of running a standard car one mile is 11 1-3 cents, and gives rules for correction in case of "long" cars, and to allow for differences in price of coal, labor, etc., and for the addition of interest and depreciation. For Boston conditions, with a plant the size of the west end, these rules disclose a cost of $10\frac{1}{2}$ cents a car, mile, with good management, or $12\frac{1}{4}$ cents, including interest. At the very utmost, allowing all claims of the West End that can not be shown beyond possibility of doubt to be faulty, and figuring interest at 8 per cent., even then the cost per car mile would be only 14 cents.

Turning to page 19 of this West End report for 1894, we find that the total number of car miles run during the year was 19,-240,486, and the total receipts \$6,734,311. This gives an average of 35 cents received for each car mile, and, as the total cost per car mile, under Boston conditions and good management, is less than 14 cents, or two-fifths of the receipts, we see that fares could be reduced from 5 cents to 2, and still allow at least 8 per cent. profit on the investment required to secure existing facilities. If the city had borrowed money at 3 or 4 per cent., and built the tramways, and the gas and the electric light systems, and run them all in conjunction with one another, and with the police and fire departments, under a good civil service, the cost of moving would be less than 10 cents a mile, and 2 cent fares would yield a handsome profit of 28 per cent., with taking into account the increased traffic sure to result from low fares, which would further reduce the cost per passenger, and swell the profit. Even now, if the city would borrow money, and buy the trolley lines at a fair valuation, it could put the fares down to 2 cents, and save to the people four millions of the six and three-quarter millions they pay the monopoly every year, or \$50 a voter and \$10 a head.

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In New York city, 2 cent fares would save the people twelve millions of the twenty they yearly pay to the street cars and elevated roads. In Brooklyn they would soon save the people four and one-half millions, and in Philadelphia five millions at least.

More than this, the increase of traffic consequent on the low rates would yield a margin that would permit the use of a sufficient number of cars to seat the traveling public, and justify the adoption of grooved rails, underground or storage power in place of the dangerous and detestable ugly overhead wires, and other improvements well known to science, but ignored or rejected by the private companies because their beauty and safety requires a little additional expense.

Numerous facts attest the justness of these conclusions. Massachusetts Rapid Transit Company Commission found in Budapest, a city of 500,000 inhabitants, the capital of Hungary, a private electric railroad system, with underground power, and a fare of $2\frac{1}{2}$ cents, on which a good profit was realized. pany pays a heavy tax to the city, puts aside a good reserve fund and a fund for the care of employes, and then pays 8 per cent. dividends on its capital. Its accounts are open to the public. Berlin the private street car companies shows 75 per cent. of the fares $2\frac{1}{2}$ cents, and an average fare on the total traffic of 3 cents per passenger. The operating expenses were little more than half the company's income. Wherefore the average cost per passenger is only a little more than half of three cents, or about one cent and a half. And this is horse car travel, which experts universally declare to be considerably more expensive than electric, a fact which even the West End reports correctly. Moreover, the Berlin company is at a further disadvantage in that it has 12 per cent. fewer passengers to carry than the West End, and is subject to the orders of the city authorities, who show a most disagreeable tendency to serve the people's interests instead of the company's, even going so far as to compel it to run enough cars to supply all its patrons with seats. In Great Britain the agerage fare for every passenger who rides on the cars of the large city companies does not exceed 3 cents, and the companies make a good profit.

In Liverpool the omnibus fare is 2 cents, and it is the same on the Birmingham street cars; and it is the duty of the police to see that seats are furnished for all who ride. In Liverpool, at places where numbers of passengers take the cars the track is deflected so as to bring the car to the sidewalk. This enables a traveler to board a car without stepping into the muddy, team-crowded street. The rails are laid so that no part of them rises above the street, the car flange running in a grove in the middle of the rail, which groove is so narrow that even the most delicate buggy wheel is in no danger of being caught in it. A similar plan is used in laying the new roads in Budapest. It is a most admirable system. as it leaves the road from curb to curb as smooth as an asphalt pavement. In Antwerp according to the United States Consul's report (April, 1892, publications of the Economic Assoc., Vol. 6, p. 611), there is no public cab service, and a citizen who lives in the central region of the city can buy a commutation ticket for \$2 a year that will enable him to go into the street at any time of the day or night, and call a small cab or herdic, and go anywhere he chooses, and as many times a day as he chooses, all for \$2 a year: from that to \$30 a year, if he lives in the outskirts of the city. Boston such privileges with the herdics would cost you \$150 to \$200 and you would run the risk of having your neck broken, too. The Berlin Stte roads would give you one ride of 5 miles for 21 cents; one month's commutation for 75 cents; two months for \$1.25, or 5 miles for a cent; three months for \$1.65; a whole year for \$4.50 to go in and out, 5 miles, as often as you please, each day, or an average of over 10 miles for a cent. If you are out of town for two weeks or more, you can have your ticket extended for a corresponding time. You're a fine old gentleman, Uncle Sam, but neighbor Fritz has one or two notions which you might adopt without injury to your reputation for common sense. In New York, Philadelphia or Boston, it costs a man from \$30 to \$100 a year for the transportation he gets in Berlin for \$4.40; and yet the German roads are making a profit of over 40 per cent. on their passenger traffic.

Let us return from our trip to Europe. Between New York and Brooklyn we shall find the bridge car line, owned by the two cities, and operated by faithful trustees. The structure was a very expensive one, costing fifteen millions. The car line is not only paying interest but is liquidating the construction cost, yet the fare is only $2\frac{1}{2}$ cents. In Detroit the regular fare is 5 cents, six tickets for a quarter, and workingmen's tickets, good for morning and night, eight for a quarter, and a new company is going to run with a 3-cent regular fare at retail. In Toledo, also, there is a low fare during certain hours. But Toronto is the city that excells all others in America in its treatment of the tramways. In 1891, the city bought its street car system, and operated it at a profit of \$25,000 a month, for six months. Then influence was brought to bear on the officers of the city, and the plant was sold to a private company with a thirty years' franchise. I hold in my hand a copy of the contract. The conditions of the purchase are very remark-The company agreed to pay to the city each year \$800 per mile of track; 8 per cent. on all gross receipts up to one million per annum; between one and one-half millions, 10 per cent.; between one and one-half and two millions, 12 per cent.; between two and three millions, 15 per cent.; and all over three millions, 20 per cent.— on the principle of progressive taxation. The fares are to be 5 cents a single cash fare; 25 tickets for \$1 or six for 25 cents; workingmen's tickets, good night and morning, eight for 25 cents; school children's tickets, good from 8 a.m. to 5 p.m. ten for 25 cents; children under 9, half fare; infants in arms, free.

The city engineer has full control over the company in respect to many vital matters. He is to see that a sufficient number of cars are run (no conductor shouting to a crowded aisle, as one did in Boston not long ago, "Move up there, move up, plenty of room." I had 90 on the other day and there's only 80 on now; move up.") The speed, as well as the service, on every part of the line is determinable by the city engineer with the council's approval.

The company must introduce any improvement which the engineer and council order. It must keep the streets in repair, remove snow, etc. Its method of keeping its books and accounts is

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subject to the approval of the city engineer and auditors. The conductors are to announce clearly the names of all streets as the cars come to them. No employe can be required to work over 10 hours a day, nor more than 60 hours a week, nor more than six days in the week, etc.

This is, beyond comparison, the best agreement for the public ever made between a city and a street car company; and yet the facts show that the public ownership was better even than this, for while the whole city netted \$25,000 a month when it operated the roads, it received only \$200,000 a year from the company, or \$17,000 a month; i. e., public ownership was more profitable by \$8,000 a month, or 50 per cent. better for the city, than private ownership, even with the finest contract ever known. a great deal of time and energy has been spent in disputes between the company and the city officers as to the precise meaning of the contract. It it is as plain as words can make it, but the company's reports state that its officers were "Almost continually engaged in settling and trying to arrange disputed questions." The antagonism of interest is still there, and the company will fight every Public ownership avoids this inharmony and the expense it entails, and instead of having a president and board of directors managing the road as nearly in the direction of the private interests of themselves and their stockholders as their ingenuity and influence enable them to do, while the city employs an engineer to watch the roads and its president and directors, and with infinite trouble compel them to do as they agreed — instead of this complex and inharmonious system, with scheming, evasion, and rebellion in its heart, how much more sensible it would be to place the city engineer in immediate control of the roads.

Yet, imperfect as the present Toronto system is when compared with public ownership, it nevertheless puts to the blush our methods of dealing with the tramways.

If Boston had such a contract as Toronto, it would not only enjoy low fares and good service, but would receive \$1,300,000 a year from the West End (probably more, for the low fares would increase travel so much that the total receipts might be more than

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at present — more than we find reported at any rate); and this is but one-third of the four millions benefit the city would receive, if it owned the roads.

Under a Toronto contract, New York city would receive nearly \$4,000,000 a year from her street car and elevated roads, and the companies would even then retain \$8,000,000 of profits beyond 10 per cent. interest on the real investment, \$8,000,000 which with public ownership would go with the \$4,000,000 to the people either in profits or lower fares, so that in Boston and New York public ownership would be three times as profitable to the people as the best sort of contract yet devised. Philadelphia, with a Toronto agreement, would receive not quite \$2,000,000 a year from her street railways. And all with 4-cent, 3-cent, and $2\frac{1}{2}$ -cent tickets, and a seat for every traveler.

Neither would the private companies be left without a profit. In Toronto we have seen that the company realized \$8,000 a month at the start, and the report for 1894 shows a net profit for the company of over \$20,000 a month. I have in my hand a letter from Mayor Kennedy, enclosing statistics from the city engineer. The points especially of note are the relation of operating expenses to earnings, and the movement of that relation:

	Gross earnings.	Operating expenses.
1894	958,570	517,707
1892	\$820,098	\$ 590,333
1893	$900,\!232$	537,597

First, as the business has grown, the operating expenses have decreased, not merely in relation to receipts, but absolutely. Second, in 1892 the cost of operation was 71 per cent. of the earnings at the low fares in force and the high relative expense of a small system. In 1894 the cost of operation was only 54 per cent. — a little more than half the receipts, with the same low fares, and a plant still diminutive compared to those in our large cities. Toronto has only 80 miles of track; Boston has 273, New York, 375; Philadelphia, 455. Boston car lines do six times the busi-

ness of the Toronto system, Philadelphia eight times, and New York twenty times. The conductors and motormen in Toronto get 16 2-10 cents an hour; correcting to Boston wages, the expenses would have been 60 per cent. of the earnings. Applying the law of relative diminution of expense with increase of business (one-fifth off, according to Massachusetts Rapid Transit Engineers, page 90 of report, when the business doubles in volume per given area of plant; nearly one-half off, according to the actually observed facts in Austro-Hungary when business is thus doubled), there can be no doubt that even with Toronto rates in Boston and Philadelphia the expenses would be less than 40 per cent. of the earnings, and in New York below 30 per cent. The average fare on the Toronto system would be between three and four cents.

Suppose it were 4 cents; 40 per cent. of this would be 1.6 cents — in other words, the experience of Toronto indicates an operating cost of $1\frac{1}{2}$ cents per passenger in Boston and Philadelphia and still less in New York. So again we come to the conclusion that 2-cent fares would pay a good margin in our largest cities now, even without the increase of business sure to be developed by lower rates. This conclusion is again confirmed by the estimates of the engineers employed by the Massachusetts Rapid Transit Commission. The figures will be found in foot note.

The Massachusetts Rapid Transit Commission, page 90 et seq., give the result of estimates by their Board of Engineers to the fact that an elevated road could be built in Boston, 131/2 miles, double track. for \$12,000,000, and operated, with 200,000 passengers a day, at less than two cents a passenger trip. The Manhattan Elevated of New York, 32.4 miles, double track, with 500,000 passengers a day, showed a cost of about two and one-half cents a trip for one passenger, but the Boston engineers found that the New Yorkers had charged up new construction to operating expenses, so that their accounts are not to be relied upon - they show a cost much higher than the reality. Even the estimates of the Boston engineers are probably too high, as they are confessedly based on the units of expense reported by private roads, under the pressure and wastes of competition and having only 85,000 passengers a day. The West End has 400,000 passengers a day, instead of the 200,000 in the above estimate; the average length of haul per passenger is less than one-half what it would be on the elevated, and electricity is cheaper than steam. If the elevated could carry its passengers at two cents' cost per trip, it is clear that the West End can carry its patrons at a still lower cost -- so that the estimates of the transit commission and its engineers confirm the conclusion arrived at in the text from so many different lines of evidence.

Looking back over the whole argument we find that analogy with steam roads, expert testimony, and recorded facts unite in making it evident that a 2-cent charge is sufficient. If Toronto owned her roads, she could pay her way and more, considering the increased traffic, on a uniform 2-cent fare, even with a little plant in a city of 150,000 people. In Berlin, Budapest and the large English cities, a 2-cent charge leaves a handsome margin for profit and improvement. If the transfer companies in any of our large cities can not give the people a 2-cent rate, it is because they are not so well managed as foreign companys, or have more water in their constitution, or more legislation to buy, or a combination of these evils; in which predicament it is the duty of the city to take the roads, squeeze the fraud and water out of them, and see that they are wisely managed in the public If the companies can give the people a 2-cent fare, and will not, then equally it is the city's duty to take the roads and save the people's money from the grasp of monopoly.

I have dwelt thus fully upon the financial aspects of public ownership of street car systems, because it is the argument most likely to move the people to action. As the little boy said in his "Essay on Man," "Man is a small animal that walks on his hind legs, feeds in the daytime, sleeps at night, and is very tame — you can put your hand on him anywhere and he won't kick, unless you touch him on the pocketbook." I want to touch the pocket nerve. Yet, intrinsically, although beyond a doubt cheap transportation will be of vast importance to the industrial, moral, sanitary and artistic welfare of the city, there are other considerations that seem to me more weighty than any reduction of rates.

Political purity demands the public ownership of these great monopolies. Here is a legislative investigation of the West End in 1890 (House Document, 585). The committee found that the West End had, in one year, paid or promised the following sums to influence legislation:

To lobbyists	\$22,000
To an attorney, for services, influence, etc., in procuring	
legislation	10,000
To another attorney, for services, influence, etc., in pro-	
curing legislation	500
For dinners to members of Legislature, at the Algonquin	
Club	1,922
For carriages for said members	584
To newspapers for printing speeches, arguments, etc., got-	
ten up by West End	7,500
	\$42,506

Besides this the committee found that "large sums" had been paid to other petitioners to withdraw. It is altogether improbable that the committee came within hailing distance of all the expenditures in the case, and perhaps the most vicious of them escaped the light; but enough was discovered to give us a clew to some of the items in the West End's overgrown expense account.

Some years ago in New York the aldermen were bribed to give a tramway franchise through the middle of Broadway. A few of the malefactors were convicted and a law was passed requiring that city franchises should be sold to the highest bidder. But the established tramway and elevated systems continue to take great interest in the city officers. Their immunity from proper regulation or any necessity to regard the public welfare depends upon this interest.

Twenty years ago it was largely the control of the principal street car line and the votes and political services of its employes that enabled "Boss" McManes and his ring to rule the Quaker City. And to-day it is a matter of common knowledge in Philadelphia, assumed by the entire press of the city as an established and undisputed major premise, that the contraction companies control the councils and aim to dominate the city elections and even the mayor's office in their own behalf. Such facts could be multiplied indefinitely, but these illustrations are suffi-

cient to show that the tramways have not been slow to imitate the execrable political tactics of the steam roads.

Justice in another way points to the need of public ownership. The West End is capitalized at four or five times the fair investment for the business it reports; its capitalization is much too large or its business and receipts are larger than it reports them. In either case its 5 or 6 per cent. interest and 7 to 8 per cent. dividend represent about 30 per cent, profit on the proper investment for the business done, and the total profit is about 70 per cent. on the required investment. In the capitalization of the New York Elevated there are about five parts of water to one of solid, according to the legislative investigation. And as to the street car lines, the New York Real Estate Commission said in February, 1893: "Your commission well know that the stock of the street railway companies represent millions of watered value, upon which the people of this city have to pay, and will be compelled hereafter to pay, millions annually." In the Brooklyn Traction Company, according to the legislative investigation of February, 1895, the water is seven to one, and an innocent looking dividend of 3 per cent. is really a dividend of 20 per cent. on the actual investment. In Philadelphia, according to the figures cited by the Municipal League (Tract 1, pp. 8-10,) for some of the leading companies, the relation between fluid and solid is about the same as in Brooklyn. The figures are as follows: Amount paid in, \$5,840,905; increase in market value of the stock, \$38,639,-000 - or nearly seven to one.

If these cities are samples, \$170,000,000 of the \$205,870,000 stock of the electric roads in the United State (January, 1894,) is nothing but water, leaving less than 36,000,000 of solid value. The Street Railway Journal for July, 1892, says that stock-watering has "come to stay," and is on the increase — "never before in our history has so much of it been done as in the last few years," In this particular line of strategy, the tramways surpass the steam roads.

The watering of stock, of the inanimate order, is a most pernicious practice, because it protects the enormous extortions of the companies by hiding them from the people, checkmates any reduction of fares by commissions or boards of regulation by confronting them with innocent holders of purchased stock, and compels the people, when they come to buy the plant, to pay many times its value.

If the street car lines in Boston and vicinity had become public property in 1860, it would have been worth to the people in rates and values from that day to this, \$75,000,000, at a moderate esti-In Philadelphia such a transfer would have been worth \$120,000,000, in New York \$250,000,000, in Chicago more than \$100,000,000 — considering in each case the value to the people of the plant they would now possess, and the amount they would have saved through lower rates in the past; such are the sums the masses of the people have lost in 35 years through ignorance of the value of public ownership. And if they continue ignorant or inert for 30 years more the indications from the present margins and rates of growth announce the warning probability that \$200,000,000 in Boston, \$300,000,000 in Philadelphia, \$500,000,000 in New York, and \$60,000,000 in Chicago, will be transferred from the pockets of the people to the coffers of a little group of capitalists who own and manage the tramways. In Chicago the three great companies are openly paying dividends of from 9 to 24 per cent.—amounting in the aggregate to \$12,500,000 a year net profits (above all expenses, taxes and interest charges), upon \$26,500,000 of watered stock.

Public safety and convenience join in the plea for public ownership. The Brooklyn trolleys have killed 104 persons in the two years of their existence. In Budapest the cars are provided with a cushioned fender which makes it totally impossible to run over anyone. A few years ago, in Philadelphia, a man invented a safety attachment for street cars. On trial with stuffed arms, legs, heads and bodies, it was found that in every instance they were rolled from the track uninjured. The presidents of the tramways met to discuss the advisability of adopting the new invention. "What will it cost?" they asked. "Fifty dollars a car," was the answer. The presidents ciphered up the total cost, com-

pared it with the damages they had been paying for accidents. and concluded it was cheaper to run over people and pay for it, and so they would not protect the cars. The roads take no interest in the safety of the city or its beauty, or they would never have adopted the ugly and dangerous trolley and pushed it through the councils against the protests of the people and the mayor and the foremost engineers when a little more investment would have: provided a much better and safer system. As to public convenience and comfort, the street car magnates care no more about them than they do for safety. The sole question with them is profit; and safety, comfort and convenience are of moment only in respect to their bearing on dividends. The companie s will not warm the cars, nor adopt the improved Pullman car till the old ones are worn out, and may be not then, nor even run enough cars to seat their patrons. In any of our ' arger cities day after day hundreds of cars may be seen crowded to overflowing - seats full, aisles so dense that the co Inductor can scarcely wedge his way through to get the far .cs, and both platforms loaded to the pressure of a mob; and ' you ask the managers for better treatment they tell you that the people on the straps make dividends. not care; they have a monopoly; and we shall have to stand it till we get sufficient sense to become the owners of the monopoly ourselves.

The objections to public ownership of street car lines are the same as are made in the case of railways. They will be found with their answers, in the preceding paper on "National Highways." The remaining arguments for municipal ownership of tramways are also substantially the same for national ownership of railways. It will help civil service reform by increasing the need for it. It will improve the condition of employes, by guaranteeing them against removal except for cause, and also by better wages, shorter hours, freedom from tyrannical control, a share in the government of the roads, and liberty of agitation for any desired change of policy, without the discharge which is certain to reward any such exhibition of public spirit now.

The civil wars we call strikes, would not occur under public ownership, for two reasons; first, it would be hopeless to oppose the power of the whole city; and second, the ballot would offer a much simpler and easier means of redressing the wrongs of the workers or the public. Brooklyn has just had an object lesson in the beauties of private monopoly in street cars, similar to the sermon that the railroad strike in Chicago preached to Uncle Sam. Thousands of men were thrown out of work in the midst of winter; public business was interferred with—no cars running, a whole city full compelled to walk many miles through the snow to their daily work; property destroyed, innocent persons mobbed, law and order and all the interests of the public at a discount; and in the end the strikers lose their places instead of gaining the increase of pay they desired. If workingmen would stop striking and go to voting they would accomplish a great deal more. for officers who will push public ownership, and the higher wages will come then without giving up your employment, and without the losses and dangers of a strike, which, besides its intrinsic evils, is apt to embitter the public against the authors of the disturbance.

Public ownership will diminish gambling, fraud, and corruption, produce an absolute and a relative economy, lower rates, afford increased facilities, improved methods, and proper attention to public comfort, convenience and safety, give the city more room and better health, help to solve the problems of the tenement, the sweat-shop, and the slums, check the power of private monopoly, aid the diffusion of wealth and the movement toward co-operation, and remove the antagonism between public and private interest which causes the evils we have been considering. Nothing but public ownership can do this. President Whitney of the West End declared that the more rigid the restrictions imposed upon private street car companies, the more persistently they would force themselves into politics, and by cunning devices con-Certainly no higher authority on such ceal unlawful profits. matters can be found than Mr. Whitney. The Western Electrician has called attention to the same point—both protests being

meant to show the futility of trying to control the companies; it would only entail additional expense—better let them alone.

As with the steam roads so here, the analogy is in favor of public ownership, and the drift of public sentiment and authority is in The mayors of Detroit, Chicago, Toledo, and New that direction. Haven have advocated municipal ownership of street car lines. Some members of the rapid transit commission of New York and Massachusetts have done the same. Professor Ely of the Wisconsin University, B. O. Flower, of the Arena, Dr. Lyman Abbott of the Outlook, Dr. Taylor of the Medical World, President Walker of the Massachusetts Institute, and a host of other eminent and public-spirited men favor the municipalization of such monopolies. A mass meeting of citizens in Cleveland and another in Brooklyn have petitioned for it; the solid business men of the New York Board of Real Estate demand it; and the Denver conference of the Federation of Labor, December, 1894, representing more than 1,000,000 workmen, voted overwhelmingly for it.

In Great Britain thirty-three cities own their tramways, and Glasgow, Plymouth, and Huddersfield have entered upon the operation of them. London, also, under the leadership of John Burns, has moved in the same direction, beginning with a single Port Arthur in Ontario owns and operates a tramway. Australia and New Zealand, also, municipal ownership has begun. In Germany, Kopernick, Weisbach, and some smaller cities, own the street car lines; and in 1911 the tramways of Berlin will become public property by expiration of their charter. the forfeiture of the roads to the government has already taken place. In Switzerland, Zurich decided last year to own and operate its street car systems. And last, but by no means least, pleasant to recite, New York city has voted to build a municipal underground electric four-track road. When a city needs larger facilities than it has, it is wise to begin with a new municipal This competition will wring some of the water out of the old companies by reducing the swollen value of their stocks, and the city can then send its agents into the market quietly, and buy a controlling interest in the street railways stocks, run the roads at a profit until they pay for themselves, and then give the people good service at cost. To buy the roads in this way would probably require no more than a third or fourth of their capitalization, six or eight millions for Boston—in original expenditure. Let us elect men to the Legislature who will give our cities home rule, so that they may have a right to build or purchase railways whenever they wish, and also a right to demand a vote on the question at the polls, and the thing is done.

Note.— For further information upon the subject of this article see "The Electric Railway." Crosby & Bell; the report of the Massachusetts Rapid Transit Commission (1892); report of the New York Rapid Transit Commission; reports of Massachusetts Road Commissions; reports of United States consuls on transportation; Providence Advance Club pamphlet, on "Street Railways."

There is another highway to which municipalities should give attention. While we are waiting for a national telephone, united with the post-office, as in many foreign countries, our cities will find it much to their advantage to municipalize the local service. It will be wise to move quickly, for a new company has been formed, with more than 80 milions of capital, to compete with the Bell. They have bestowed \$362,000 in stock on each of two Philadelphia bosses for their influence in council. They are bribing legislatures and city governments to get the franchises they wish. They will spend a mint of money in rival plants, fight a bit, maybe, then combine with their opponents, as the telegraph, gas, electric companies, etc., have done, water themselves tremendously, and make twice as powerful a combination for the public to overcome and twice as costly a plant, with four or five times as much capitalization, for the people to buy and pay for.

The present rates in the United States are extortionate to the last degree. In Boston the annual rent of a telephone is from \$75 to \$156, within a mile of an exchange, with extras reaching to \$200 for greater distances. In Philadelphia the charge for an ordinary house telephone runs from \$100 to \$250 a year. In New York the usual rate is \$240 a year. The charge for five minutes? use of the long-distance telephone between New York and Chicago is \$10.

The public telephone of Germany costs the subscriber \$36,000 a

year; in England the charge is \$35.70 a year; in New Zealand, \$24 a year; in Switzerland \$24 the first year, \$20 the second, \$16 the third; in Sweden, \$10 a year, put in free of cost, and connected with every city in the kingdom. Such are the rates of public telephones. It is not low wages, for wages and machinery are higher in New Zealand than in the United States. It is not inefficient service, for the service is good in all of these countries, and United States Consul Byers, at St. Gall, declared officially, May 5th, 1892, that the Swiss telephone service was the best in the world. It is not that the business is a losing one; it pays for itself and more at the quoted rates. No, it is simply the economy and public spirit of an enterprise owned by the people, united with the post-office, and managed for the good of the community instead of for dividends.

How long, my friends, will you pay for your telephones ten times what they are worth? How long are you going to act like the deaf and dumb man at Twain's California lecture, who never saw a point nor moved a muscle? How long will you sacrifice the future interests of yourselves and your children on the altars of careless indifference and criminal neglect?

The following facts as to the operation of the city railway of Berlin, under city ownership, are here pertinent. From the Brooklyn Citizen, July 14, 1895:

"The Stadt-Bahn, or city railway, of Berlin — corresponding with, though far superior to our 'L' roads — is the best city railway in the world, according to the report of the Boston Rapid Transit Commission. The arrangements for the convenience of the public are perfect.

"Commutation tickets are sold without the annoying restrictions put upon their use common to private corporation management in this country; their holders may ride as many times a day as they desire. A year's commutation costs 200 single fares, so that for an outlay of \$4.50 one can travel a distance of five stations (about five miles) for a year as often he chooses.

"The New Yorker, traveling over the 'L' road once a day to and from his business, pays the company \$30 a year, but there are many who are obliged to pass several times a day back and forth, and their expenses for fares amount to \$60 or \$100 a year, while the Berliner who travels the average distance on a commutation ticket may go back and forth to an unlimited extent for \$4.50 a year, paid to the State government.

"This city railroad, though built at a cost of over \$16,000,000, is now, in direct returns, paying a profit on its cost, besides the inestimable benefit derived from the facility of movement, the impetus which it has given to the growth of the city and the gain in the cheapness of living which it has brought about.

"In the case of the East river bridge we have no longer to deal with a theory, but an accomplished fact. There we see an example of a great public function subject to public control. we see one of the world's gigantic bridges and an important railroad owned by two municipalities and controlled by them. situation in respect to this vast enterprise is not as yet an ideal one, but it is a great deal nearer to being so than it would be if it were controlled, for instance, by the shylocks who control the Brooklyn trolley roads. Does anyone suppose for a moment that he could walk across the bridge free or enjoy the benefit of a reduction in fare if it were owned by a Gould or Sage, or controlled by a Lewis or Norton? If he does he is greatly mistaken. they would do is illustrated in the case of the bridge across the Mississippi river between the cities of St. Louis and East St. Louis, over which no person may pass without paying toll to the Missouri Pacific Railroad Company. The people own the river, but Gould owns the railroad and the bridge.

"With such a notable instance of efficient administration of local transit in the very part of the world that furnishes the most notorious and monumental example of corrupt municipal government, it may well be asked why the elevated railways of New York and Brooklyn could not in the same way and with equal success be publicly administered primarily for the benefit of the public, instead of compelling the latter to pay unceasing tribute to the most dangerous class in America, and thus steadily augment the irresponsible power of a plutocracy over the liberties, possessions and lives of the people."

Judge Gaynor's Decisions in Application for a Writ of Mandamus to Compel the Street Railway Companies to Obey the Law.

SUPREME COURT.

In the Matter of the Application of Loader for a Writ of Mandamus v. The Brooklyn Heights Railroad Company.

It is my duty to declare the law of this case. This railroad corporation is not in the position of a mere private individual or company carrying on business for private gain and free to suspend business temporarily or permanently at leisure. On the contrary, it has a dual relation, a public relation to the people of the State, and a private one to its stockholders. It must not be forgotten here, though it may seem to be growing dim, if not wholly forgotten elsewhere, that in its chief aspect it is a public corporation, having duties to perform to the public which transcend any obligation which in its private aspect it owes to its stockholders. It has received franchises of great value from the State, and had conferred upon it the State's transcendent power of eminent domain. In return it took upon itself the performance of public duties and functions, in the performance of which it is in law and in fact, not an independent individual or entity, but the accountable agent of the State. Though these principles are old, and inherent in the idea of the sovereignty of the people, it would seem that in the recent rapid growth of corporate power and of the tendency to use public franchises for the aggrandizement of the individuals first and for the service and benefit of the public second. they have come to be somewhat overlooked, and need to be re-They have often been declared by the highest courts of this State and the Supreme Court of the United States. (Olcott v. The Supervisors, 16 Wall, 687; Bloodgood v. The Mohawk, etc., R. R. Co., 19 Wend., 9; The People v. N. Y. C. & H. R. R. R. Co., 7 Hun, 543.)

The duty of the company now before the court is to carry passengers through certain streets of Brooklyn, and to furnish, man and run cars enough to fully accommodate the public. It may not lawfully cease to perform that duty for even one hour. The directors of a private business company may, actuated by private greed, or motives of private gain, stop business and refuse to employ labor at all unless labor comes down to their conditions, however distressing; for such are the existing legal, industrial and social conditions. But the directors of a railroad corporation may not do the like. They are not merely accountable to stockholders; they are accountable to the public first and to their stockholders They have duties to the public to perform, and they must If they can not get labor to perform such duties at perform them. what they offer to pay, then they must pay more, and as much as is necessary to get it. Likewise, if the conditions in respect to hours or otherwise which they impose, repel labor, they must adopt more lenient or just conditions. They must not stop their cars for one hour, much less than one week or one year, to thereby beat or coerce the price or conditions of labor down to the price or conditions they offer. For them to do so would be a defiance of law and of government which, becoming, general, would inevitably, by force of example, lead to general disquiet, to the disintegration of the social order and even the downfall of government Experience shows the wisdom of our fathers in retaining at least some control of corporations to which are given public franchises for the performance of public duties.

I shall quote from a case decided upon appeal by the Supreme Court in this State in 1883, after mature deliberation, and which is an authority I am bound to follow even though I were not of the same view, and which, I need scarcely say, the corporation now before this court is bound to acquiesce in, and I doubt not it will immediately acquiesce in for example's sake if for no other reason. That case arose out of the failure of the New York Central and Hudson River Railroad Company to receive and forward freight as a common carrier. The language of the court is as follows: "According to the statements of the case a body of laborers, acting

in concert, fixed a price for their labor and refused to work at less price. The respondents (the railroad company) fixed a price for the same work and refused to pay any more. In doing this neither did an act violative of any law, or subjecting either to any penalty. The respondents had a lawful right to take their ground in respect of the price to be paid, and adhere to it, if they chose; but if the consequence of doing so were an inability to exercise their corporate franchises to the great injury of the public, they (the railroad company) can not be heard to assert that such consequences must be shouldered and borne by an innocent public, who neither directly nor indirectly participated in their causes." (The People v. N. Y. C. & H. R. R. R. Co., 28 Hun, 543.) The court, in that case, allowed a writ of mandamus to compel the corporation to do its corporate duties.

That a private citizen has sufficient standing to make this application, which could unquestionably be made by the Attorney-General of the State, has heretofore been twice decided by this court, and I must accept it as law. And it being admitted that the company is not fully operating its lines of road, it follows that it is my duty to allow the writ prayed for, either in its peremptory or alternative form, unless a sufficient answer has been made in law.

I do not think the answer of the company is sufficient to prevent a writ from being issued. The claim of violence amounting to a prevention is not legally made out. Instances of violence, generally by others than the former employes of the company, are shown, but it is also shown that not only is the police force of the city, but also over 7,000 soldiers, are preserving order, and I can not believe that this company is not protected in its rights, nor do I think that any question of fact is fairly raised on that head. Besides, the persistence of the company in failing to run its cars except as it may gradually get employes to accept its terms, being in itself unlawful, as I have shown, must necessarily by its bad example tend to public disquiet, if not to some disorder. In respect of the question of hours and of wages between the company and its employes, its duty was to have gone on, and now is

to go on, with its full complement of employes, having the right gradually, and from day to day supercede its employes, if it can, by new employes, who will work on its terms, or to supercede them all at once when it has obtained a sufficient number of new employes for that purpose; but in such a controversy it has not the right to stop its cars while it is thus gradually getting other men. If the people of the State were running these roads they would not thus incommode and damage themselves, and it must not be forgotten that this corporation is entrusted with the running of these roads as the servant of the people of the State.

It, therefore, only remains for me to determine the form of the writ, whether it shall be peremptory or alternative. In one aspect of the case there seems to be one issue of fact presented, and if such an issue be presented, the law does not permit me to decide it, and allow a peremptory writ, but requires me to allow an alternative writ, which has the effect of reserving such issue of fact to be tried by a jury, or by the court, if so agreed upon. At one place in its answer the company avers that a reason why its employes would not continue working for it was, "That it refused to run its cars as required by said employes in respect to the frequency with which cars should be run, and by the number of cars to be run." The number of cars or trains which a railroad shall run is left to the sound discretion of its directors, subject to review by the courts upon an application for a writ of mandamus to make them run more if the public convenience require it. Its employes may not assume to determine the number of cars to be run. If, however, this allegation in the answer refers to the controversy in respect of what are called trippers, then it has no force, for that controversy is in its essence one in respect of hours and wages.

The counsel for each side will be heard at 10 o'clock on January 25th, as to which form of writ shall be issued.

Note.— The writ was issued, but the statute allows 20 days to answer such a writ, and the court has no power to shorten the time. The committee which investigated the strike was asked to report a bill to enable the court in any case to shorten the time, but it neglected to do so.— Ed.

SURPEME COURT v. THE ATLANTIC AVENUE RAILROAD COMPANY.

Gaynor, J.:

To deny this application I would have to decide that this company is prevented by violence from operating its roads; but that I can not find upon the papers before me. I do not find that the city and the State have failed to fully protect its power-house, its stations, its roads and the cars it has offered to run. I do not find that government has failed at all in its obligation of protection. The answer to the statement that there have been instances of violence, is that they were swiftly suppressed. I can not acquiesce, or even seem to acquiesce, in statements which have made it appear that mob volence or riot has ruled in Brooklyn, and which have not only given a law-abiding community a bad name. but by exciting fear in many must have done incalculable damage to business interests. To try to forcibly prevent the company from doing its public duties would be lawlessness, while on the other hand, for the company to stop running cars to beat down the price or lawful conditions of labor would be lawlessness of a much more dangerous and far-reaching character. The company's public duty is to run its cars, and it may not lawfully cease to do so on the ground that it can not get men to work at the price or conditions it offers. The law requires it to continue to run its cars to the full accommodation of the public, leaving it free to supersede its men from day to day by men who are willing to work on its terms, or to supersede them all at once when it has obtained men enough to enable it to do so. In all lawful conduct the company is entitled to the full protection of government, but it is not entitled to such protection to aid it in lawlessness. The relation between it and the government is reciprocal; performance of duty on the one side and protection on the other go hand in hand. But the company by its answer having raised issues of fact, the law requires that an alternative instead of a peremptory writ be issued, so that there may be a jury trial. Code of Civil Procedure, § 2070. This court can not change the law, but must obey it whether it be

obeyed elsewhere or not. If it be a defect in the law that the time for the trial of such issues may not be shortened by the court, the suggestion is one to be made to the legislature, not to the court.

Let the writ issue.

JUDGE GAYNOR'S LETTER TO THE BOARD OF MEDIATION AND ARBITRATION.

To the Board of Mediation and Arbitration:

Brooklyn, February 4, 1895.

I regret that other duties prevented me from responding at once to your request that I state to you in writing what I deem the the cause of the existing contention between two street railway companies in Brooklyn and their men. I shall not speak in respect of what came before me judicially at all (for I question your right to examine me concerning that), but only of things that I am free to speak of, like any other citizen.

I read the testimony taken before you, and was not surprised that no two witnesses, whether railroad officials or employes, agree fully in respect of what the cause is. The real cause does not lie in anything stated before you. It lies in a state of moral disquiet and moral protest, not confined to the employes of the companies, but pervading this intelligent community, and which was caused by recent speculative uses and manipulations which these companies have been subjected to by certain individuals who have come into control of them. Take the case of the Brooklyn City Railroad Company. Up to about three years ago it was a healthy enterprise, and was paying large dividends. No one was jealous or uneasy over the prospects of its stockholders, for they were fairly entitled to it, though the stock and bonds may in the just opinion of many have grown larger than the actual outlay warranted. Its bonded indebtedness had been enlarged to three million dollars (\$3,000,000), and its paper shares to three million dollars (\$3,000, 000), making a burden of six million dollars (\$6,000,000).

But it is what followed that I desire to state to you. The bonded indebtedness was increased to six millions (\$6,000,000), and the papers capital to twelve mllions (\$12,000,000). Thus at a

few strokes the company's burden was raised to eighteen millions (\$18,000,000). Coincident with this, it is true that a change was made from horse to electricity. Whether the fair cost of the change was equal to this great increase in paper stock and in bonds I leave to those who know what the legitimate cost a mile for such a change, or even for the building and equipping new of an electric street railroad is.

But the case does not stop here. The next two steps are what aroused the public conscience. Those in control took this great company, and, in 1893, leased it for 999 years to a little street railroad company, called The Brooklyn Heights Railroad Company, which they had got control of. This little company had a paper capital of \$200,000, and a mile or less of track running from Court street down to the Wall street ferry. One might think that instead of the great Brooklyn City Railroad Company system being turned over to this miniature company, the reverse would have happened; but it did not, for that would not have served the purpose in view. By the terms of the lease, this little company agreed to pay the interest on the \$6,000,000 in bonds, and a yearly dividend of 10 per cent. on the \$12,000,000 in paper stock of the Brooklyn City Company. All the surplus it was to keep. That was to go to its stockholders. Thus this little company was made the absorber of all the earnings of the Brooklyn City Company over and above what would have to be taken to pay, as above stated, the interest on the bonds and a 10 per cent. annual dividend on the stock of the latter company.

But even this did not satisfy those who had gone that far. They must go further. To evade the payment of the incorporation tax of this State, they went down to the State of West Virginia, and there, March, 1893, formed a corporation called the Long Island Traction Company, with the enormous paper capital of \$30,000,000. I need hardly say that this huge paper company had not a day's work or a dollar back of it. It did not own a steel rail, a stick of wood or anything in the world. All that there was of it was on paper. It was not a railroad company, but a business company, its very name being a falsehood. It was brought up to Brooklyn

and those who created it, and also owned and controlled the little Brooklyn Heights Company, turned over to it the certificates of stock (\$200,000) of the latter company. And thus, connected by these two links with the Brooklyn City Company, this West Virginia Company, with its sham paper capital of \$30,000,000, became the absorber, through the little Brooklyn Heights Company, of all the earnings of the Brooklyn City Company over the interest on bonds and the 10 per cent. annual dividend on stock already specified.

The effect of these transactions was pernicious to the community. They were discussed and condemned wherever two or Our people looked on and became justly irritated and three met. They knew that the thing remaining to be done by those in control of these enterprises was to thus absorb a surplus out of the Brooklyn City Company large enough to pay a dividend on this sham \$30,000,000 of paper stock of the West Virginia Company, thereby to make that stock worth par, and enrich its holders out of the industry of others. To do this the employes of the company knew, and everyone knew, that the expenses of the Brooklyn City Company would be cut down to the lowest point. of such stock inflation is always the same; the attempt by this means and by that to get money to pay a dividend upon it always follows, and thus it is always the cause of heartlessness and oppression. In giving you this history concerning the City Brooklyn Company I have given you the history of the Atlantic Avenue Company, which is subject to the same process of inflation and absorption by another so-called traction company. Thus, with this just apprehension on the part of the employes, and the impulse on the other hand to cut every expense down, it was natural that even a small dispute should cause a serious rupture. Nothing else could be reasonably expected from such feverish and unhealthy conditions.

But it is said that all of these transactions were strictly lawful. I admit it. They may have been in strictest accordance with statute laws, as any court would have to decide. But what of that? Is the law always right in what it permits? If that were

so, we would never need to change. Jesus was tried in an august court, and convicted according to law; and in our day and generation the poor fugitive slave, Dred Scott, was taken and remanded back into human slavery by the Supreme Court of the United States in strictest conformity to law. The one concurrence did not retard the moral growth of the human race; nor did the other postpone the coming liberation of the slave. The human race is moving forward, and does so chiefly by making laws and conditions better. To say that thing is done according to law, or that there is no law forbidding it, does not always relieve it from moral odium.

The transactions to which I have called your attention are not singular to Brooklyn. Their like are to be found in nearly every locality in our country. They have come to be the order of the In place of being checked by laws they are often fostered If this condition were to continue, what the end would be no one who has studied causes and effects in history can fail to perceive with clear vision. The prime object of government is to promote distributive justice, and thereby make the governed stable and content; and no government which does not do this may in the nature of things long endure. That our government, through the instrumentality of the people, educated in our common schools, is not to fail in this in the end, is not to be doubted, though it may not be perceived in the present political outlook. jealousy against wealth in this country. On the contrary, those who accumulate wealth in any legitimate calling, professional, mechanical, mercantile, agricultural or other, are subjects of emulation and honor. When I was a boy if a farmer got along so that he could afford to paint his house, we all respected him, and if he got along still further we honored him more, and all my life I have seen the same feeling prevalent in this country. It is wealth got by this means and that, by trick and devise, but all the while according to law, which is under the ban of the splendid intelligence and moral sense of the people of this country.

In the immediate dispute which led to the conflict between the companies and the men I see nothing worthy of serious attention.

The dispute was too small not to have been easily settled, except for the inflamed condition which I have described to you, brought on by the attempt to create vast wealth on the one side, being met by justly aroused uneasiness and apprehension on the other. Under healthy conditions the dispute would not have lasted an hour, if it arose at all. I remind you that in the case of the other two large companies here, the same dispute was settled at once. Until the cause is removed it is idle to try to prevent the effects. I submit this in the hope that it may promote thought and do some good.

WILLIAM J. GAYNOR.

A PARTIAL SOLUTION OF THE RAILWAY PROBLEM. By C. J. Buell.

All highways should be the common property of all the people, free and open to all carriers at all times. The carrying trade itself over these highways, like all other productive enterprises, should be kept entirely free from public interference of control. Most of our highways are now common and free, and much of our carrying trade is in this ideal condition. The railway is about the only exception. There the highway is monopolized; hence, the carrying trade is monopolized by the highway owners, and the people are robbed by unjust charges; while on the free oceans, lakes, rivers, canals, country roads, and city streets, competition keeppps carriers' charges down to cost of service.

The final solution of the railway problem is how to make the railways free public highways, to which any carrier may adjust his engines and cars, and enter into competition with all other carriers unhindered by governmental interference or regulation. This solution is probably some distance in the future, but an immediate, practical, partial remedy for railway strikes and other present troubles lies close at hand and is easy of application.

Every railway corporation owes its existence to a public grant. It is a creature of the government—a public servant. The one reason for its existence is its obligation to run trains and serve the

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people. The moment trains cease to run regularly, that moment the company forfeits all claim upon government for protection to its property. It is not the business of the government to regulate the relations between railway corporations and their hired men, any more than between merchants and their clerks, or between houswives and their hired girls, but it is as much the business of the government to compel all railway corporations to perform their contracts with the people as to protect their property. Any government that fails to compel corporations to run their trains and serve the people fails in its duty, proves treacherous to its trust; and it should be promptly supplanted by a government of the people, but not one owned by the railway companies.

Enforce this principle. Let our present executives and courts do their plain duty; use soldiers and injunctions, if necessary, against the guilty managers, not against innocent employees, and no railway corporation would dare underpay or abuse its men. Enforce this principle, and railway workers will take care of themselves. The companies will be obliged to pay living wages and treat their men decently. They would not dare to let a strike occur. Their own personal, selfish interest would solve the problem of their relation to their employees.

Under the existing status of privately owned railroads, the whole problem sums itself up in this: Can we, the people, elect governors, presidents and judges who will serve the people instead of the corporations to whom we have foolishly granted a large part of our sovereignty? And until the railways are made free and open to all cariers on equal terms, until the railways are made real public highways instead of private roads, this will be the practical problem: How to force the companies to run their trains regularly and serve the people, regardless of what wages they are obliged to pay their men.

It is, perhaps, needless to say that this principle applies only to such corporations as exercise public functions as railway, street car, gas, water, telegraph, telephone, and other corporations of like character, who enjoy a special grant of franchise. Of course, such franchises should never be granted; but those to whom they have been granted should be held to the strictest performance of their duties to the public.

Note.— This article was in our hands December last, some time previous to the decision of Judge Gaynor, in the Brooklyn Street Railway mandamus case — a decision which sustains every essential point in Mr. Buell's brief article.— Editor Arena.

Why not own our own property.

It is a well-known fact that judges of our higher courts are almost invariably chosen from the ranks of corporation attorneys. And it is also equally true that the tendency of our courts in rendering decisions, where corporate interests are involved, is to show a biased leaning towards them.

Perhaps in some way, they were former clients of the judge upon the bench, but that does not necessarily mean judicial corruption.

The fact of these decisions proves that the reasoning of the attorney continues to predominate the mind of the judge.

The following, however, is both novel and refreshing, when it is remembered as the utterence of a judge of the Supreme Court of Speaking recently before the graduating class the United States. of Yale University, in referring to what he termed, "Natural Monopolies," Judge Henry B. Brown, said: "Indeed, whatever the proposed business is, of public or semi-public character, and requires special privileges of the State or a partial delegation of Governmental powers, such, for instance, as the condemnation of land, or a special use of disturbance of the public streets for the laying of rails, pipes, or wires, there would seem to be no sound reason why such franchises, which are for the supposed benefit of the public, should not be exercised directly by the public. Such at least, is the tendency in modern legislation in nearly every highly civilized State but our own, where great corporate interests, by parading dangers of "Paternalism" and "Socialism" have succeeded in securing franchises which properly belong to the public."

When the source from which this comes is considered, and the influences which surround the individual are taken into account, it speaks volumes for the progress of thought in this day.

Judge Brown sees what Eugene V. Debs saw, when, in answer to a question he said, "I believe it is a question as to whether the government shall own the railroads or the railroads shall continue to own the government."

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Think of the venality, combined with idiocy, which is involved in private ownership of public franchises. The city lays out a street, grades it, paves it, sewers it, lights it, appoints policemen to guard it, and having gone to all this expense for it every day, hands over its entire revenue, millions annually in the future, to a few men for nothing. This sounds ridiculous at the close of this century, but it is the absolute truth. The people have taxed themselves to build that roadway, and now they are going to give it away.

We are willing to take the risk of an attack of "Paternalism" if we can keep our own property.

As Judge Brown says: "If a municipality owns its streets and keeps them paved, sewered and cleaned, why may it not also light them and transport its citizens over them?

Why not?

Municipal versus private ownership.

In making the comparison for the purpose of having due prominence to the magnitude of the interests involved, the following statement of facts, with accompanying table, published in the New York World of July 14th, 1895, may be interesting and instructive:

THE STREET CAR INTEREST.

Its growth is the wonder of the financial world—some interesting statistics.

The growth of the street car and traction interest in this country is the present marvel of the financial world. Large investment houses are now giving their entire attention to dealings in the securities of these corporations, and as they are good dividend payers as a rule, they command high premiums and are hard to get at any price in many instances. New York State leads the list

with 1,583 miles of track, of which 1,020 are electric. Pennsylvania with 1,422 miles, has 1,304 of them covered by trolley wires. Idaho is credited with only three miles of track. In capitalization New York State leads with \$329,308,168 total security, or an average of \$207,100 per mile of track. There is a big drop from this average to New Jersey, which shows \$128,500 per mile of track. Dividing the country into five groups of states, the figures stand:

STATES.	Roads.	Horse.	Electric.	Total.	No. cars.	Total capital.
(6) New England. (7) Eastern. (9) Central. (9) Southern. (11) Western.	104 305 278 111 178	. 168 567 555 214 410	1,392 3,189 3,578 1,48	1,560 4,102 4,519 1,176 2,231	5,519 16,001 16,936 1,930 4,359	\$97,324,300 597,512,578 396,208,525 56,734,625 152,359,683
Totals	916	1,914	10,363	13,588	44,745	\$1,300,139,711

A comparison of city ownership, as shown by the New York and Brooklyn suspension bridge, with private ownership, as shown by the management of Brooklyn's street railways, compiled from official reports and the Brooklyn Eagle Almanac, 1894:

NEW YORK AND BROOKLYN BRIDGE.

Cost, \$15,000,000; equipment, \$2,500,000 (July 11, 1895). No capital stock; therefore, no water to incite the cupidity which cheats the public, while it stimulates the greed for unearned dividends which always results in unsatisfactory service to the people, in further oppression for employes, and is the seed from which sprouts the demoralizing strike which affects the whole community.

The bridge was opened for traffic in 1883; fare on promenade, 1 cent; fare on railway 5 cents.

Traffic on the bridge in 1884 was 12,460,840, realizing \$465,802, being about 3 per cent. of cost of bridge. Reduced fare causes increased traffic. Fares reduced in March, 1885, to 1-5 cent on promenade, and $2\frac{1}{2}$ cents on railway. This decrease in fares caused an increase of traffic on railway from 6,980,870 for the nine months preceding the reduction to 14,330,367 for the nine months succeeding the same, being over 100 per cent. increase of traffic on a 50 per cent. decrease in fare, demonstrating that decreased fare causes increased traffic.

In 1892 the promenade was made free. The railroad traffic in 1893 was 42,615,105, realizing \$1,167,497.65, being nearly 8 per cent. of cost of bridge.

On July 11, 1895, the total cost of equipment, including large purchases of land for approaches to bridge, cost of new depots, etc., was \$2,500,000. The increased traffic in 1895 will undoubtedly yield \$1,500,000, being over 8 per cent. of total cost of bridge and equipment.

As the bridge paid Brooklyn and New York over a half million dollars last year, reducing the tax levies by that amount, it is apparent that the improved facilities for handling the constantly increasing traffic will soon enable the trustees to pay the entire No. 98.] 1615

cost of the bridge, and then a 1 cent of $1\frac{1}{2}$ cent fare will be more than sufficient to pay cost of maintenance. Under city ownership an absolutely free bridge is already in sight.

As to employes' pay.

Bridge trainmen receive 34½ cents per hour, making \$2.76 per day, eight hours of easy work constituting the day; and they receive two uniforms per year gratis. The fair wages and treatment accorded acts as a stimulus to efficiency, and rarely does one hear complaints of the actions of these men. Doubtless, they are no more intelligent than their brothers on the surface roads, but the stimulus of good pay and the knowledge that loss of present place means lower wages at some other employment incites every man to his best efforts to hold that which is in sight. bridge were in the hands of a private corporation no rational man will doubt that one-half of the trainmen and platform guards would be dispensed with and the wages of the others reduced, while their hours of work would be increased; all with the single idea (which is predominate with all such corporations) of boosting dividends. The public, well, the public be —

STREET RAILWAYS (BROOKLYN CITY SYSTEM, REPORT 1893).

Cost of roads and equipment, \$14,350,000; capital stock, \$9,000,000; watered to \$30,000,000 in 1894, as vouched for by Supreme Court Judge William J. Gaynor. Frederick Uhlmann, president of the "Brooklyn Union 'L'" road, in sworn statement before the Assembly investigating committee, sitting in Brooklyn, July 18, 1895, said, "I think that watering of railroad stock is absolutely essential to the growth of the railroad system."

James H. Frothingham, treasurer of the Kings County "L" road, stated at the same time and place: "The capital stock of our company is \$4,750,000, not a cent of which has been paid in, the shares being distributed among the promoters and original bondholders as compensation for services and inducement for further energies."

The Brooklyn City Railroad began operations in 1854. Fare on three main lines, 4 cents; fare on five branch lines, 5 cents.

Traffic on street railways in 1884 was 47,000,000, realizing \$2,-272,984.73, being over 15 per cent. of cost of roads and equipment. Increased fare robs the public. Fares increased to 6 cents in 1863 in direct violation of law, and now kept at 5 cents in direct violation of charter, though the traffic has increased to 83,196,302 in 1893, realizing \$3,760,744, being over 25 per cent. of cost of roads and equipment. That these roads could be run at a 2-cent fare and still make money the following facts and figures prove:

The traffic on street railways in 1893 was 83,196,302. On a 2-cent fare, and allowing policemen, postmen and firemen to ride free, there would be realized about \$1,500,000, which is over 10 per cent. of the cost of roads and equipment. The experience of the bridge shows that reduced fares causes increased traffic; so we can safely add 20 per cent. to the traffic, which would make it 100,000,000, which, at a 2-cent rate, would realize \$2,000,000, and enable as good wages to be paid the motormen and conductors on street railways as is now paid bridge trainmen, viz., \$2.76 per day of eight hours.

As to employes' pay.

Elevated railway employes provide their own uniforms and receive \$1.50 and \$1.75 per day of ten hours, six trips constituting a day's work. Trippers, who may hang around all day and not earn a cent, receive the munificent sum of 30 cents per trip, and if so lucky (?) as to get two trips a day, for the second trip they receive 15 cents.

Street railway motormen and conductors receive about 17 cents per hour, making \$2 per day for ten hours' hard work in twelve hours' time (in compliance with law, but which the companies interpret as they please), if they happen to be so fortunate as to have regular cars, but, owing to the always overstocked labor market, upon which the companies know they can freely draw, they are scaled down by a beautiful process, until, coming to the poor "extra," on the bottom of the list, who, putting in weary days

and weeks of waiting — attending the departure of every car — and not receiving 1 cent, is buoyed up by the hope that some day he may successfully climb the formidable list ahead of him through some poor fellow dropping out because of sickness, death or discharge, and attain to a "steady run."

As to the convenience of the public.

How many people have been killed and maimed by the street cars because of their being run at illegal speed and because of lack of fenders, or none worthy of the name, though the time fixed by law for the equipment of each car with one has long since expired; and the companies are now striving to have the speed ordinance rescinded.

How are the elevated railway cars lighted? In every respect and at every public demand the people's wishes are not complied with.

MUNICIPAL V. PRIVATE OWNERSHIP.

Under municipal ownership the street railways would be provided with life-saving fenders, of which there are several on the market, and the "L" roads would be run and lighted by electricity. All rational men must know that private ownership of public franchises always results in indifferent service to the people:

First. Because grasping corporations enjoying them have but one though — reducing expenses and increasing dividends; and

Second. Because their ill-treated employes are never in a frame of mind to put forth their best efforts, but ever remain a dissatisfied and discontented set of men. If the bridge, with its annual traffic of 40,000,000, saves the cities of New York and Brooklyn \$1,500,000 per year by being owned and conducted by themselves, is it not a fair supposition that city ownership of all the street railways (elevated and surface), with their annual traffic of over 188,000,000 and earnings of over \$9,000,000, would save the citizens of Brooklyn at least \$4,000,000 per annum on a 2-cent fare?

We have now set before you both sides of the case, without prejudice, taking our facts and figures from published reports of the bridge trustees and railway companies.

[Assembly, No. 98.]

It is for the voters of New York and Brooklyn to say whether they prefer private management, with high fares and poor service (to say nothing of the murders of our friends and children, caused by fenderless cars traveling at illegal speed), and injustice to employes, with consequent strikes and their attendant loss to the city (a total of at least \$1,000,000 by the last strike), together with the disgrace of military occupation; or, city ownership and good management, with low fares and justice to all, and the best possible service.

WHICH SHALL IT BE?

A simple plan to secure city control.

A leading member of the New York bar has stated that the city of Brooklyn can sectire from our State Legislature the right to equip a railway; that the city can run its cars over existing lines by paying a fair rental for their use; and by charging the legal rate of fare, which is 4 cents, and by giving the best service compel these private corporations to give up their franchises by depriving them of patronage, as three-fourths of our citizens would ride in city cars only. All that is necessary is the simple consent of the Legislature permitting the city to operate street railways, specifying the routes desired. A special legislative act will accomplish this.

The Municipal Ownership League of Brooklyn has issued the following enrollment blank, to which they invite the signatures of all who favor the principle of city ownership:

Municipal Ownership League — 1895.

It being a demonstrated fact that the street railway, gas, telephone, electric light and water supply corporations are monopolies whose existence is due to public favor, and believing that the service rendered by each is a proper function of government, the undersigned favors the immediate enactment of a law which will place the street railways of this city under municipal control, and also the enactment of a bill giving to the several coun-

ties of the State home rule in taxation, so that the people may possess a potent weapon to use when these corporations attempt to saddle the municipality with their millions in watered stock. The undersigned agrees to also vote at the coming election for no candidate who will not publicly pledge himself in favor of the above mentioned measures.

NAME.	Ward.	Residence.
·		

The initial fight of the plain people against special privilege.

When signed, return to Joseph McGuinness, chairman of provisional organization, No. 970 Gates avenue, Brooklyn.

See page 27 for reference to the following note:

Note.—In 1853, when the population of Brooklyn was about 150,000, the Brooklyn City Railroad Company obtained its charter on an agreement to run cars on Myrtle avenue, Fulton avenue and Court street, charging a 4-cent fare, and on five branch lines a 5-cent fare.

In December, 1854, they "saw" the common council and were allowed to make the fare 5 cents on all lines. In January, 1860, the common council passed resolutions compelling the issuing and sale of 25 tickets for \$1. The company paid no attention to this, as the war was then engrossing public attention, and, to add insult to injury, in 1863, they raised the fare to 6 cents in direct violation

of law, and thereby subjected themselves to a legal penalty of \$50 fine for each 6-cent fare collected. This extortion continued until 1866, when, instead of the common council forfeiting the company's charter for this violation of law, they merely compelled a reduction to a 5-cent fare, which is 1 cent more than the legal rate; 2 cents more than necessary for a liberal profit, and 3 cents more than necessary for a fair profit.

REPORT

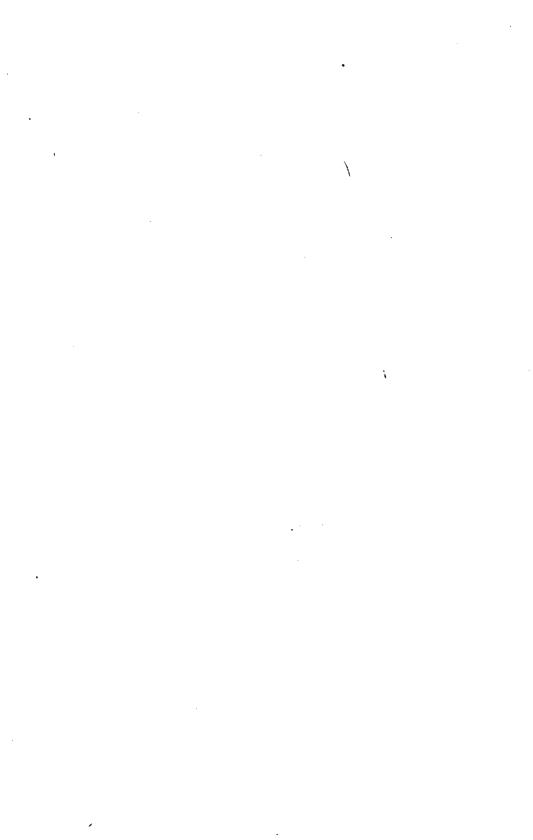
TO THE

Board of Rapid Transit Railroad Commissioners in and For the City of New York.

on

RAPID TRANSIT IN FOREIGN CITIES.

By William Barclay Parsons, Chief Engineer. 1894.



REPORT.

NEW YORK, November 20, 1894.

To the Honorable the Board of Rapid Transit Railroad Commissioners:

Gentlemen.— At a meeting of your board, held July 17, 1894, a resolution was passed instructing the chief engineer to proceed to "Great Britain and Europe to study the several systems of rapid transit in use in foreign cities and report thereon to this board."

Pursuant to this resolution, I have inspected the several rail-ways in operation and under construction in London, Glasgow, Liverpool and Paris, and on a previous occasion I examined the Stadt and Ring-Bahms in Berlin, which constitute the principle European railways coming under the head of rapid transit.

LONDON.

There are now in operation in London three underground railways—the Metropolitan, the Metropolitan District and the City and South London; while there are under construction the Waterloo and City Railway, and the Blackwell Tunnel. The latter, though not a railway, being for vehicles and pedestrians only, merits consideration on acount of its size.

In addition to the above, the following underground railways are proposed: Central London, Waterloo and Baker Street,

Great Northern and City, Charing Cross, Euston and Hempstead, and an extension of the City and South London.

The first attempt made anywhere to carry out rapid transit railroads was commenced in London in 1853, when powers were obtained to build a line two and one-quartermiles long from Edgware to Kings Cross, from which commencement grew the two lines now known as the Metropolitan and the Metropolitan District Railways. The former company reports that it now sends its trains over $68\frac{1}{2}$ miles, of which the greater portion is owned, the balance being other lines with trackage rights, while the District Company controls over 38.8 miles. As these railways have some track in common 6.2 miles are counted twice in the above figures.

It was at first intended that these lines should be confined exclusively to a local business in the same way that the elevated railroads in New York are operated, without direct communication with other lines. The roads, however, did not prove to be very profitable, and additional revenue was sought by making connection with the trunk lines for the interchange of passengers or to permit the other railways to run their ows trains into the heart of London, while the underground companies began to develop a suburban business by extending their own lines out of London, or by running their own trains over other railways.

The construction of both these lines is similar, but subject to great variations, being in places under the streets, and elsewhere under or, in the suburbs, on private property. The method of construction, even along the busy streets, unless great depth necessitated tunneling, was by "cut and cover;" that is, by open excavation, the surface of the street being afterwards restored. The sections of the covered portions, whether built as a tunnel or by "cut and cover," is in nearly all cases that of a brick arch,

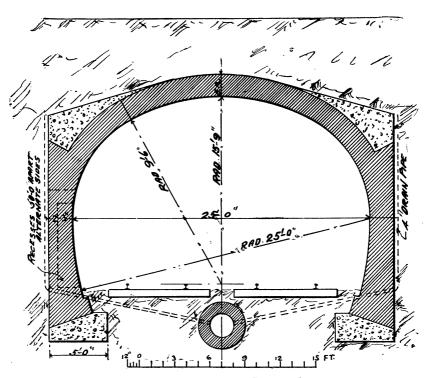
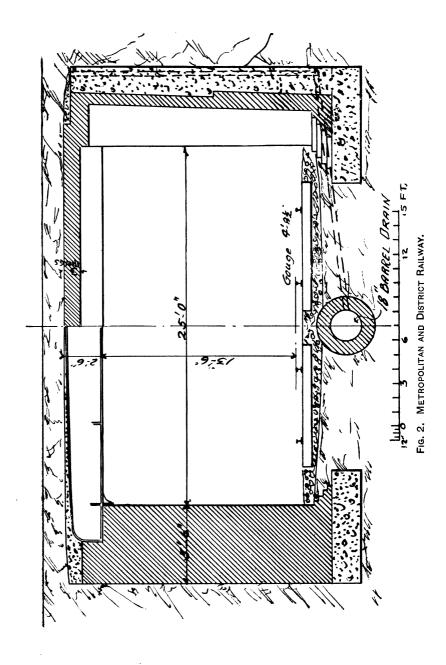


FIG. 1. METROPOLITAN AND DISTRICT RAILWAY.





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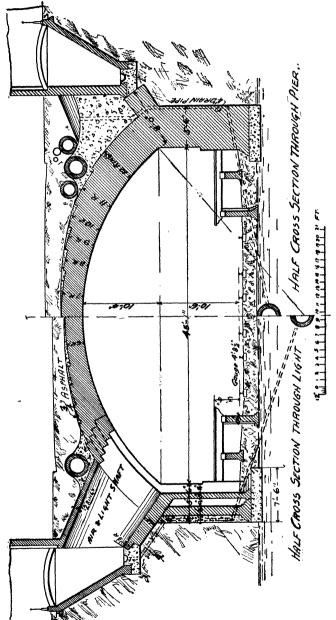
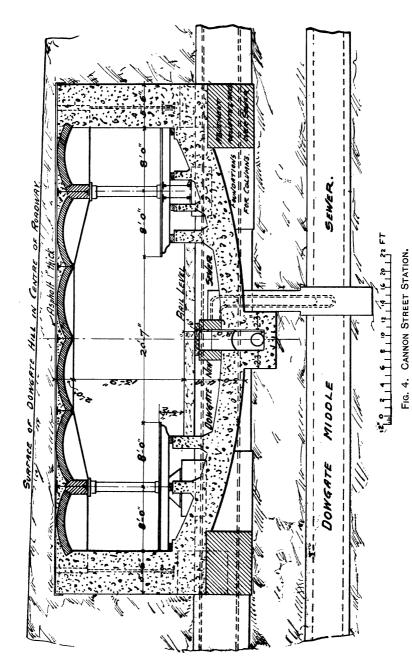


FIG. 3. BAKER STREET STATION.







OF OF



a type of which is shown in figure 1. Where headroom was limited, a section was adopted as shown in figure 2, with masonry side walls and iron cross girders with brick jack-arches turned between them.

The stations vary greatly in appearance and plan; some of them are entirely underground, as shown by two types, the Baker street station and the Cannon street station, in figures 3 and 4, the former being a brick arch spanning the platform and tracks, while in the latter, where headroom was limited, resort was had to girder construction.

Wherever the arrangement was possible, even at considerable expense, the stations were built open at the top. Figure 5 is a photographic view of the Mansion House station, a good specimen of such construction.

On the Inner Circle, which is the most strictly urban portion of the route, the average distance between stations is slightly less than half a mile; that is, there are twenty-seven stations in 13.1 miles. The longest distance is one mile, and the shortest three-sixteenths of a mile. One hour and ten minutes is required for the circle journey, giving an average speed of twelve miles per hour, stops included; but a very large amount of time is lost through the latter.

The following figures, checked on subsequent occasions, so as to insure a fair average, show what this loss amounts to, time being taken from actual stop to start of train:

Stations. Westminster bridge	Min. Sec. 0.44
Charing Cross	0.23
Temple	0.33
Blackfriars	2.30

Stations. Mansion House	Min. Sec. 0.36
Cannon street	0.30
Monument	0.30
Mark lane	0.38
Aldgate	2.00
Bishopsgate	0.45

Average, 55 seconds.

Omitting the Blackfriars and Aldgate stops, where extra delays occurred, the average stop was $38\frac{1}{2}$ seconds, but I found that nearly every train met with one or more such extraordinarily long stops by being delayed by junction points or from some other cause. No attempt was made to give the stations a pleasing appearance; in fact, any such attempt would have been rendered ineffectual by the engine smoke and the hideous advertising signs with which the station walls in England are covered. The general effect of the stations, however, has been improved by giving them their platforms, and their stairways generous proportions. The minimum platform length is 300 feet and the width is about 16 feet. The stairs are generally 8 feet wide, the rate of accent being agreeably easy.

Both of these railways are operated by steam locomotives, discharging the product of combustion directly into the tunnel, which is without any system of artificial ventilation. The bad effect of this arrangement is minimized as much as possible by burning the best quality of coal, which is free from sulphur and makes but little smoke.

The engines used are of a condensing type whereby the steam, instead of being brown through the stack, as is done in the ordinary locomotive, is conveyed back into a water tank and there condensed, so that although the smoke and the products of com-

bustion are allowed to escape into the air, exhaust steam is not, and the air is thus kept drier and less disagreeable than it would be if the ordinary type of locomotive were used. The engine drivers are instructed to refrain as much as possible from working the engines "hard" in the covered portions of the line. spite of these precautions, however, the air in the tunnel is extremely offensive. In order to reduce the vitiation to the least degree, the lines have been so constructed so as to utilize every available opportunity to introduce an open cut. In those portions where the line passes along the busy street, and where an open cut is an impossibility, blow holes or small openings have been made, through which some foul air can escape and fresh air be sucked in by the passage of trains. The stations have also been left uncovered wherever it could be done, and where it could not be so arranged, a great point has been made to have a small section cut immediately preceding and following them.

To ascertain the cost of these lines is very difficult. The capital invested is as follows:

Metropolitan

metropotium.	
Debentures, $3\frac{1}{2}$ to $4\frac{1}{2}$ per cent	9,999
Guaranteed stock, 3 per cent	0,000
Preferred stock, 4 to 4½ per cent	0,113
Common stock 5,28	1,830
Total	1,942
District.	
Loans or debentures, 31 to 6 per cent	2,575
Guaranteed stock, 4 per cent	8,244
Preferred stock, 5 per cent	0,000
Common stock	0,000
Total £7,80	0,819

Giving a total of £20,002,761. This amount, however, does not represent the cost, as the stock was sold at prices varying from 20 to 140.

It can be stated approximately that the ordinary two-track tunnel or covered way cost for construction alone, exclusive of land, land damages, equipment, and legal or other expenses, from £200,000 to £250,000 per mile; while expensive portions, such as the Cannon Street line, where the work was carried on under one of the busiest streets in London, cost for construction alone, exclusive of all other expenses £400,000 per mile, and it is probable that with the other items, added the cost for that mile not far from £1,000,000.

It is instructive to note that this portion of the line was constructed in the following manner, and as illustrated in figures 6 and 7. The street is narrow, being but 49 feet from house to house, with a 30-foot roadway. Operations were commenced by laying a timber platform across the street stout enough to carry the very dense traffic. The rail level being considerably below the house foundations the front house walls were next underpinned to the required depth. Trenches were then sunk along the curb line and enough earth removed from the center of the street beneath the timber platform to permit the roof arch to be turned. This done, the remaining core was removed and the invert laid, completing the tunnel. Finally the street surface was restored. The illustrations show the several steps and also the manner of handling the pipes and sewers.

The maximum gradient is 1 in 70 (1.4 per cent.); but the worst gradient to operate is one over three-quarters of a mile long at the rate of one per cent., with the Kings Cross station, located at the

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foot of, and the Gower Street station on the incline. The radius of the sharpest curve is 528 feet.

The results of the operation are not very favorable. In the case of the District Company, during the year ending June 30, 1894, the interest on the bonds were paid, and the dividends declared on the guaranteed stock, and on the preferred at the rate of $3\frac{3}{4}$ per cent. The ratio of working expenses to gross receipts was $46\frac{1}{2}$ per cent. During the same period the Metropolitan Company paid interest and dividends on its senior securities and also a dividend on its common stock of $2\frac{5}{8}$ per cent. The ratio of operating expenses on this line was $43\frac{1}{2}$ per cent. During 1893, the District Railway carried, exclusive of season ticket holders, 37,749,726 passengers, and the Metropolitan 85,589,855. The fares charged on both lines are according to distance for the three classes, and must be low in order to compete with cheap omnibuses. The average fare received on the District, and the proportion of the whole business done by each class, were as follows:

First-class, 13.6 per cent. 4.3 pence; second-class, 20.6 per cent., 2.9 pence; third-class, 65.8 per cent., 1.88 pence.

On the Metropolitan, the average fare received for all classes, exclusive of season tickets, was 1.72 pence.

City and South London Railway Company.—In 1884, powers were obtained for a line to be built from a point in the city near the monument, under the river Thames, to Stockwell, in South London, a distance of 3.5 miles, which railway was completed and put in operation in December, 1890.

This line is interesting for two reasons: First, it was built by a totally different method of construction from the other London railways; second, it uses electricity for its motive power. It was designated by Mr. J. H. Greathead, and consists of two cast-iron

tubular tunnels, one of which is shown in figure 8. These tubes are at a distance of from 40 to 80 feet beneath the surface, following generally the lines of the streets, and nearly always on the same level, distant a few feet from each other.

In one street, however, which was so narrow as to prevent the tubes from being driven side by side without encroaching upon private property, one tube was depressed and carried beneath the other.

The tunnels were built by means of circular shields. The stations, six in number, are also circular; the five intermediate ones being double where each railway tunnel was enlarged so as to accommodate a train and station platform.

According to the company's report, the road has cost £839,970, or an average of £267,000 per mile. The road is operated from 6 a. m. to 11:30 p. m., with a headway in the busy portion of the day of about four minutes. There are four stations in addition to the terminals at Stockwell and at the monument in the "City" The longest distance between any two points is threeof London. quarters of a mile, and the shortest slightly less than half a mile. The street level at the stations is generally about 50 feet above the platform level, communication being maintained by means of two staircases and two elevators. The latter are semi-circular in plan, and together fill an iron-lined shaft 25 feet in diameter. The elevators cost annually about £2,650 to operate, a cost per passenger of about 1-10 penny over 5 per cent. of the gross receipts. The fare is 2 pence for any distance and is paid on entering the station. There being but one class, no tickets are issued, and the number of passengers is registered by turnstiles. During the year ending June 30, 1894, 6,476,505 passengers were carried.

Ventilation is secured automatically by the piston action of the

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trains, which nearly fill the tunnel, so that each train propels in front of it a column of air, which finds its way to the street through the stairways or elevator shafts, while the same train is sucking down through the previous station a similar amount of fresh air. Inasmuch as the motors are electric, and the only fouling of the air is that due to the passengers, the amount required to be changed per minute is small. The air in the stations is quite fair, although susceptible of further improvement.

This road has received the warmest commendation and also the most stringent criticism. The fact of a railroad tunnel with a comfortable atmosphere has led the optimistically inclined to overlook all faults, while the pessimistic observer, impressed with the defects and discomforts, failed to appreciate any success. The real condition lies between the two. The cars are small, badly ventilated and lighted, hard riding and noisy. These defects are due in part to faults in construction which were forced on the company. When the work was undertaken, one of the objects was to demonstrate the feasibility of the method of construction. Financial resources being limited, the smallest possible tunnel section (10 feet 2 inches in the clear) was adopted in order to save A car that can be run in such a tube is too small for comfort; while the restricted internal area of the car gives a limited number of cubic feet per passenger, so that the air in the cars is quickly fouled. In fact, with few passengers, a rise of two degrees in temperature was noticed in a run of only half a mile between stations. The cars fitting the tunnel closely, the use of either "clear stories" or external ventilators is prevented, so that the changing of the air in the cars is difficult. There is considerable noise, which though objectionable is not enough to prevent conversation. The greater part of this noise is due to the projecting ribs of the cast iron lining plates, which stand out over three inches, forming rings every 1 foot 7 inches. These projections catch up the air currents and set up noise vibrations which are echoed and re-echoed from all the other rings. Were the sides of the tunnel smooth, these sounds would largely disappear. This is demonstrated in one place where the tunnels were driven through wet ground, and the lower half of the tubes are lined with concrete flush with the flanges to prevent their being broken in case of a derailment. To one riding on the motor, the noise at this point is much less noticeable. In all the railways proposed to be built in London according to this method of construction, the defects mentioned will be obviated or reduced by using larger tubes lined with concrete or brick.

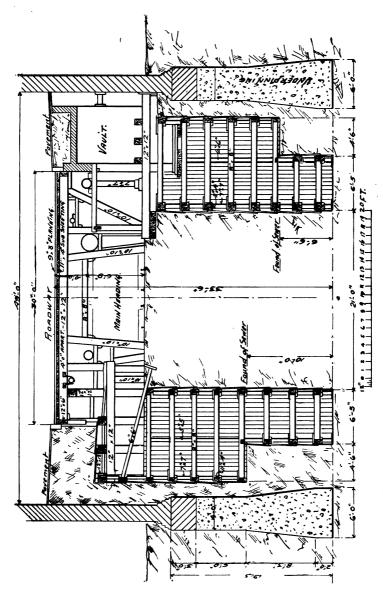
It is a common fear that a tunnel road will present such differences in temperature as to be disagreeable, if not dangerous. On this point I made some observations with a thermometer in the various tunnels inspected. In some of those operated by steam, there was actually a rise in temperature, due of course to the locomotives. In the city and South London, however, where there is no heat in the tunnel, except from the electric lights and the animal warmth of the passengers, the temperature of the stations was 67 degrees to 68 degrees, with a temperature of 69 degrees at the surface, showing that the air was changed sufficiently often to prevent any great loss of heat. As the train came out from the railway tunnel into the station, propelling a column of air ahead of it, a thermometer held at the mouth of the smaller tunnel showed a fall of 4 degrees. The temperature in the cars was 70 degrees.

The most interesting part of this line is the electrical operation. . When construction was undertaken, it was proposed to move the









CROSS SECTION OF SIDEWALL THENCH, AEADY FOR CONCRETE, FIG. 6. CANNON STREET CONSTRUCTION.





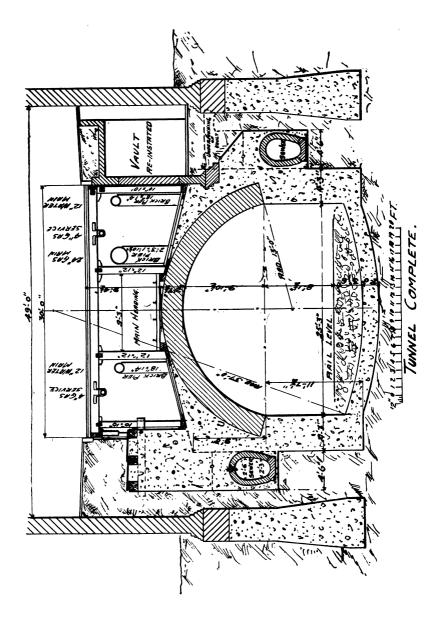
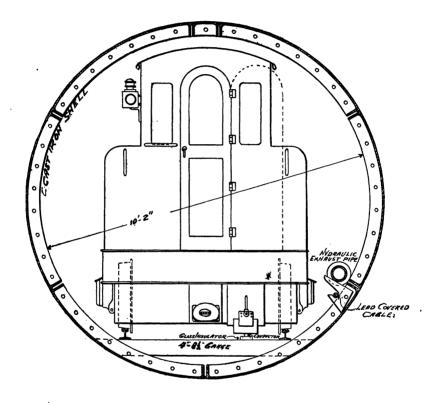


FIG. 7. CANNON STREET COMPLETED.







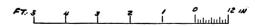


FIG. 8. CITY AND SOUTH LONDON RAILWAY.



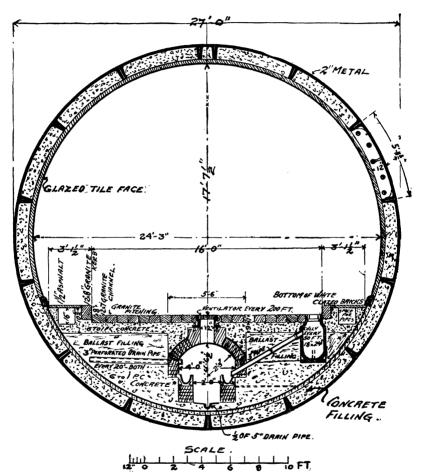


FIG. 9. BLACKWALL TUNNEL CONSTRUCTION.



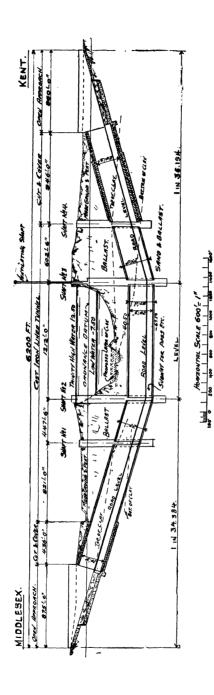


FIG. 10. BLACKWALL TUNNEL. LONGITUDINAL SECTION.

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trains by cable, so that heavy gradients were permitted, the maxmum up gradient being 3.33 per cent. for a length of 462 feet, while a rate of over 7 per cent. was used on a descent. The advance in electrical traction, however, led to its submission in place of the cable.

The electric power house is located at one end of the road and contains eight boilers carrying a pressure of 140 pounds with four compound non-condensing engines of 400 I. H. P. each, driving by leather belts four Edison-Hopkinson dynamos, capable of giving a current of 450 amperes each at 500 volts.

There are four feeder lines, two of which are connected with the working conductor at a distance of 12,800 feet from the generating station. Two are coupled in parallel as far as Stockwell, and then one is continued to the Oval, where it is connected with the working conductor at a distance of 4,330 feet. The working conductor is a mild ductile steel channel, weighing 12 pounds per yard, carried on glass insulators set between the rails, which latter are used for the return current.

The locomotives, of which the company possesses sixteen, weigh $10\frac{1}{2}$ to $13\frac{1}{2}$ gross tons, and haul a train consisting of three cars, each car being 32 feet long and seating 32 passengers. The cars have end platforms with end doors, while the seats inside are placed longitudinally. The average speed from terminus to terminus, including stops, is $11\frac{1}{2}$ miles per hour, or, excluding stops, $13\frac{1}{2}$ miles; while a maximum speed of from 20 to 25 miles is reached between stations. The time occupied in stops varies generally from 12 to 16 seconds. The engines are sufficiently powerful to haul five cars instead of three under the same conditions.

[Assembly, No. 98.]

The regular service consists of ten trains at the busy hours, with seven trains as a minimum.

The electrical plant was installed under a guarantee from the contractors that the cost of working was not to exceed 3.5 pence per train mile for a service of 14,800 train miles per week, and 6.3 pence for 8,247 miles, which figures were to cover the entire cost of operating the generating plant, supervision, fuel, and the cost of maintenance of the electrical conductors and locomotives, but not the driver's wages. There are now being made an average of 8,769 train miles per week. During the half year ending June 30, 1894, the total expense connected with the locomotives and generating power, including all wages, supplies and repairs for a mileage of 227,363 miles amounting to £5,893 14s. 1d., an average cost of 6.22 pence per train mile. Deducting two pence per train mile for driver's wages, the cost of each mile is 4.22 pence to be compared with the guaranteed figure of 6.3 pence, although the trains are 30 per cent. heavier than the original contract called for. The coal, a poor quality of slack, costing 13s. per ton, delivered, is burned at the rate of 28 pounds per train mile. From observations made, the company estimates the total efficiency of the power plant at 60 per cent. at the busy hours, with an average of 55 per cent. during the day. At the end of this report there will be found a comparison between these and other similar figures and those of steam railways, which make a very favorable comparison in favor of electricity. The item of repairs has been very low, although the electrical machinery was put in some few years ago, when the present high degree of efficiency had not been reached. Up to January 28, 1894, two of the engines built by Mr. Siemens had made a mileage of 59,221 and 49,580 miles respectively without any repairs being necessary. The total cost of repairs to the

machinery and locomotives has been small, averaging since the road was built, three farthings (1½ cents) per train mile.

On the Manhattan railway in New York, the cost of repairs to the steam locomotives averages 3.6 cents, but even allowing that the latter trains are twice as heavy as the former, still the cost of repairs per ton mile is less for the electric than for the steam locomotives.

The road is capitalized as follows:

	£88 7,730
Common stock	630,000
Preferred stock, 5 per cent	72,400
Loans and debentures, 4 per cent. and 5 per cent	£185,330

During the last half year ending June 30, 1894, the gross earnings were £24,294 17s. 6d., the net £9,304 14s. 4d., which sufficed to pay the fixed charges, preferred dividend, and a dividend on the common stock at the rate of 1 per cent.

The Blackwell tunnel is to connect the north and south banks of the Thames, just east of Greenwich, and is intended for vehicles and pedestrian travel. Although not a railroad line, it is being built by methods similar to those used in railway construction, and it is of such large size and importance that it can properly be considered here. Work was commenced in 1892.

In section it is to be circular with a diameter in the clear of 24 feet 3 inches with a roadway of 16 feet and two sidewalks of 3 feet $1\frac{1}{2}$ inches each, as will be seen in figure 9. The total length is 6,200 feet, of which 1,735 feet form open cut approaches, 1,322 feet are cut and cover, and the balance of the distance is being tunneled by means of a shield. These dimensions are shown in

figure 10, a longitudinal section. The diameter of the cutting edge of the shield is 27 feet 8 inches, the largest shield ever used. The construction of the tunnel portion will consist of cast-iron plates bolted together, the internal portion being lined with glazed brick, with a course of glazed red brick about 3 feet above the sidewalks to relieve the monotony of the white. The portals and open cut approaches will be finished with brick and cut stone.

The rate of progress with such a large shield and under great difficulties is necessarily slow. A good week's work consists of ten rings, 2 feet 6 inches each, put in place, while the average work is but 5.3 rings. This average will be increased as the men become more proficient.

The contract price for the work is £870,000, but extras and changes will probably bring the cost up to £1,000,000. The cost per ring length (2 feet 6 inches), of the tunnel section for the cast iron and excavation proper, exclusive of masonry, lining and road surface, etc., is £314. There are in that distance 56 cubic yards of material to excavate and 15 tons of cast iron to erect. Putting the latter at, say £4 10s. per ton delivered, the cost of each yard of the former is £4 8s., or about \$22.

One of the remarkable points in connection with this work was the excessive amount of cut and cover work done on the approaches. The plans originally called for that method to be followed to a point where the depth to the bottom of the excavation was 40 feet, after which the work was to proceed by the use of a shield. Although the contractors had the shields and the necessary air and hydraulic plant installed, they preferred as a matter of economy to carry the cut and cover operations on till a depth of 65 feet was reached.

No. 98.] 1637

The Waterloo and City Railway.—Of the proposed railways, the most promising is the Waterloo and City, a line 1.58 miles long, running from Waterloo Station on the south side of the Thames, thence under the river along Queen Victoria street to the Mansion House. It will be operated by and practically owned by the Southwestern Railway Company, and is intended to carry the latter's passengers from the Waterloo terminus to the "City." The line is to be double, each track in a cast iron tube, a section of one being shown in figure 11. An inspection of the diagram will show that the faults of the City and South London tunnels have been avoided by increasing the diameter from 10 feet 2 inches to 12 feet 1\frac{3}{4} inches, and by making the interior smooth with concrete. The tubes are to be side by side, 17 feet 6 inches center to center.

At the Waterloo end the bottom of the tunnel will be 27 feet 6 inches beneath the street surface, and at the Mansion House 65 feet, while the maximum depth will be 78 feet. Under the river there will be 24 feet of soil above the tubes. Inasmuch as clay is found the whole length of the line it is not expected to use compressed air, even under the river. Along Queen Victoria street the rail level will be 48 feet 6 inches beneath the rail level in the District Railway tunnel under the same street. The maximum gradient will be 1.67 per cent. for about half a mile, while the sharpest curves have a radius of 330 feet. The station arrangements have not been decided on, but a contract has been let for the two tunnels for a distance of 1.38 miles for £230,000 a rate of £167,000 per mile, exclusive of stations, land, general expenses and equipment. Work has already been commenced. The road will be operated by electricity, but whether by motors or motor cars is not settled.

At the city terminus the switching of trains for the return journey will be done on tail tracks with cross overs.

The Central London is projected to run from Shepard's Bush, there making connections with the West London Extension of the Metropolitan and District Railways; passing thence through the districts of Bayswater, Paddington, and Notting Hill to Hyde Park, and thence under Oxford street and Holbourn to the city; with its terminus at Liverpool street. This road is expected to provide facilities which the Metropolitan and District have failed to do. They circle around the busy and congested portion of London, leaving the real thoroughfares of traffic in the hands of the omnibuses, the competition of which has already been severely felt.

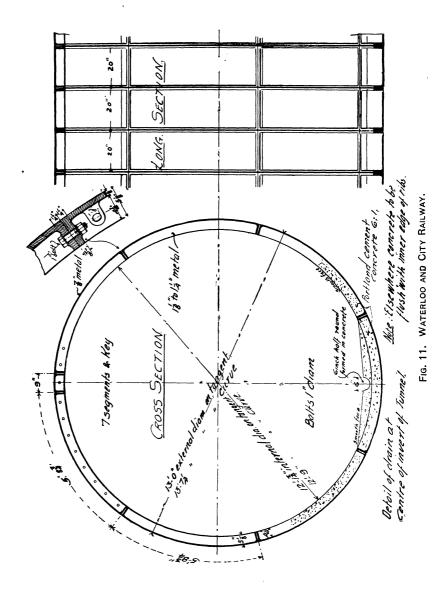
Realizing that urban travel goes in straight and not circular lines, to secure which travel the railways must follow the same lines, the promoters of the Central London have laid out their railway along the great streets named. The construction of this road has not yet been undertaken, but in appearance it will resemble the Waterloo and City just described. The same can be said of the Waterloo and Baker street, and the Charing Cross, Euston and Hempstead. The former is projected to run from Waterloo station under the Thames to the Baker street station of the Metropolitan Railway, via Northumberland avenue, Pall Mall, Haymarket, Regent street and Portland place, while the latter connects Hempstead with Charing Cross, touching en route Euston and St. Pancras stations. The Great Northern and City is connected with the Great Northern Railway at Finsbury Park and to carry its suburban trains into the city at Moorgate street. It will differ from other proposed lines in that its tunnel will be 16 ft. in diameter, in order to accommodate the regular Great Northern carriages.

This is the only one of the proposed lines that will have a physical connection with the other railways or is intended for anything more than a strictly local traffic. Parliamentary powers have been obtained for all the above, and also for an extension of the City and South London, and construction can be expected in the near future. The total mileage of these projected lines is about $23\frac{1}{2}$ miles.

The Handling of Freight.—The question of handling freight as well as passengers has received attention in London, and the best development is to be seen in the Broad street freight stations of the London and Northwestern Railway. This station is located in the very heart of London, within one-half mile of the Bank of England. The railway officials declined for evident business reasons to furnish any statistics as to the tonnage handled; but it is by a long way the largest freight station in point of traffic, in London. account of the value of the land, the ordinary arrangement for moving cars by a switch engine were quite impossible, while the railway tracks had to enter the station on a viaduct above the street level. The whole station, including shifting tracks, office building, dray yard and platforms has been located on a piece of ground 550 feet by 430 feet. The very limited area demands that there be no storing of goods, as is so common in American freight houses, and that merchandise must be shipped and delivered to consignee as soon as received. To accomplish this the company has its own system of drays, as is frequent elsewhere in London and in England generally, which all shippers with but a few special exceptions must use.

Although there is more or less business done during the whole of the day, the great rush commences late in the afternoon, when the drays start out to collect goods of which the merchants have sent notice. These loads commence to arrive at the station from about 5 to 6, and by 9 the platforms are piled high. The various articles are loaded on cars standing on tracks parallel with and alongside of the platforms. The work of loading is materially assisted by a number of hydraulic cranes.

When a car is loaded, instead of hauling it out by a switch engine, a man hooks a rope into the draw bar, takes a couple of turns of the line around a hydraulic capstan, presses a pedal on the ground with his foot which sets the machinery in motion, and the car starts forward. On reaching the end of the short track on which it was loaded, it passes on to a platform, which the switchman cleverly sets turning by clearing the line from the capstan, throwing it around a snatch block, and drawing it taut. car is then turned 90 degrees from its original position and is on a long track crossing all the platform tracks at right angles. By making connection with another capstan the car is moved along this track to another turntable, again turned, and run on to a hydraulic elevator, by which it is quickly raised to the upper level. On this upper level and running from each elevator, of which there are three, is a track crossing a system of parallel tracks at right angles, each crossing having another small turntable. In a similar manner to that described on the lower or ground floor the car is run forward, turned, and placed on one of these parallel storage tracks, where it becomes part of a train. As soon as a train is made up complete, an engine backs down, is coupled on, and then starts out with it. The men doing the work of shifting the cars become so proficient in the handling of the ropes and capstans that a car practically never loses its headway from the time it first starts until it reaches the elevator. By midnight or shortly afterwards the platforms are cleared. At about 3 a.m. the inbound



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FIG. 12. BROAD STREET FREIGHT STATION. EXTERIOR.





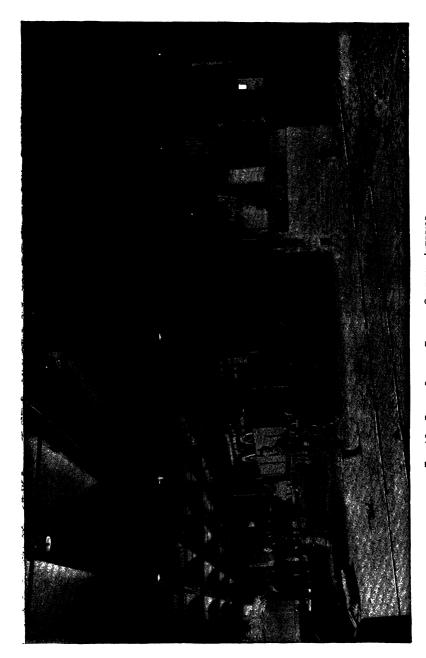
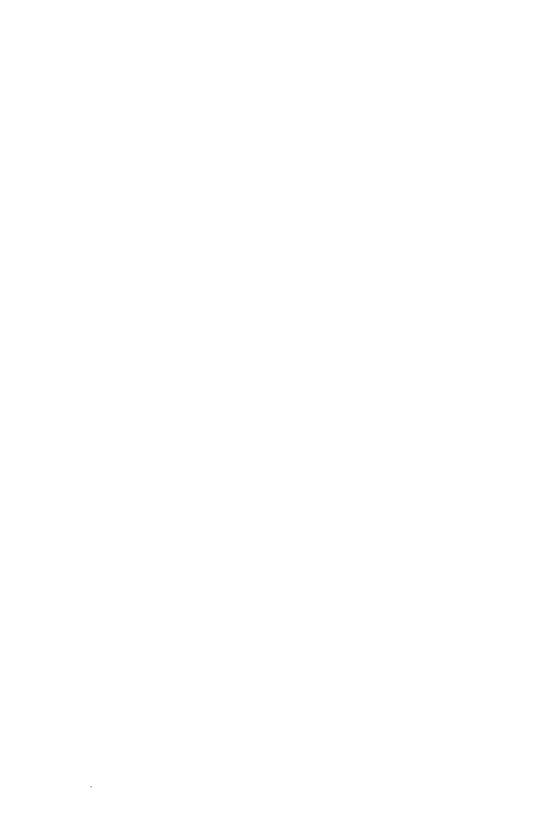


Fig. 13. BROAD STREET FREIGHT STATION. INTERIOR.





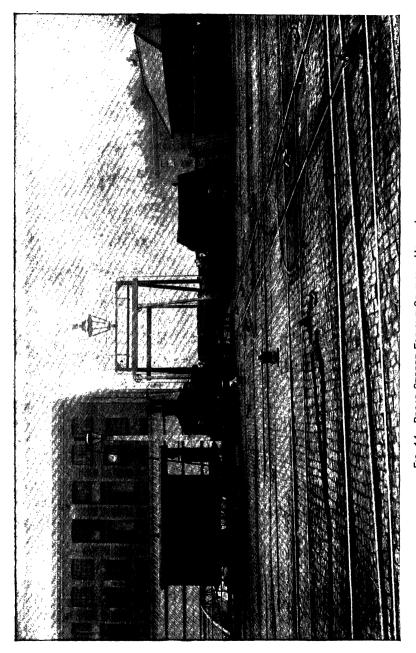


FIG. 14. BROAD STREET FREIGHT STATION. UPPER LEVEL.



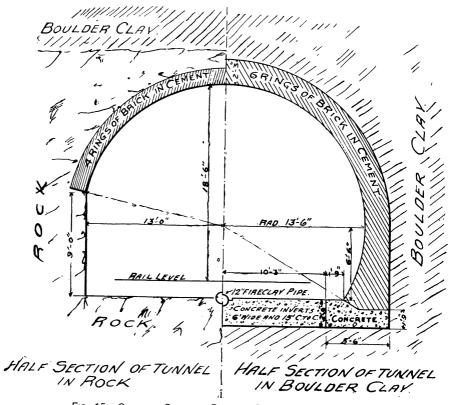
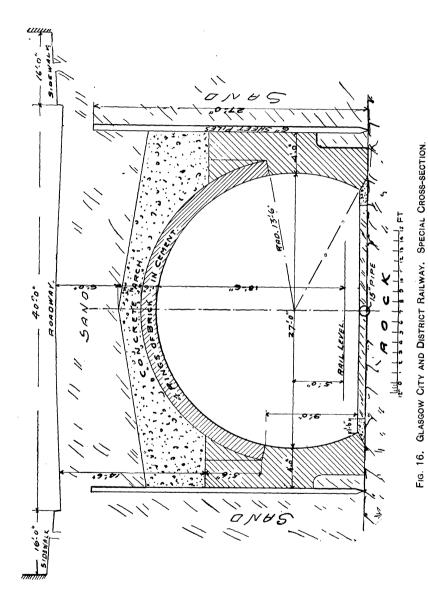


Fig. 15. GLASGOW CITY AND DISTRICT RAILWAY. CROSS-SECTION.





(ship)

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traffic commences to arrive, the process above described is reversed, and at 7 a.m. the platforms are again piled up with goods, which are then removed by drays, and delivered at the various addresses as fast as possible. By this use of their own drays, the company is enabled to keep entire control of its business and maintain the regular course of its traffic unimpeded. Goods are collected at the close of the day, and delivered in the morning before the commencement of the day's business. Figures 12 and 13 and 14 are from photographs, and show the working of the station. first is an exterior view, and shows where the drays drive in through the various arches (which support the tracks overhead on the upper level) to deliver or receive goods. The second is an interior picture of the ground floor, the loading platforms and standing tracks being visible in the distance, while in the foreground is a turntable, a capstan, and a car being moved. The third, figure 14, shows the upper level, with the system of yard tracks, and a car just raised on the elevator ready to be moved forward and set on a delivery track to become part of a train.

GLASGOW.

In Glasgow there is one underground railway in operation and two more, besides a roadway tunnel beneath the Clyde, under construction, all of which present interesting and instructive features.

The Glasgow City and District Railway obtained its parliamentary powers in 1882, being projected to connect two lines of the North British Railway, so that certain of its trains could be run through the city. The length of the line is 3.123 miles, with four stations.

Of this distance one mile was built by tunneling, some of it

being a depth of 100 feet; 3,483 feet were built by cut and cover: 3,942 feet were in open cut between retaining walls; 330 feet were under bridges, and 342 feet were under the Queen street station, the main Glasgow terminus of the North British Railway. maximum gradient is 1.18 per cent. Work was commenced in 1883 and the line opened in 1886. The road is double track, and the general type of construction is a brick arch, with a clear span of 26 feet, in rock where no side walls were used, and 27 feet otherwise. The material passed through a very variable solid rock, shale, clay, sand and mud, much of the latter very wet, being encountered. During construction the work was open at 22 different places, so as to facilitate progress. Some of the tunneling was through rock, but much of it was through clay, mixed with a sand or mud-carrying water. The method employed was to carry the overlying ground on timber supports, which caused in some places some settlement of the surface. The typical section of the railway in the tunnel portion through both rock and clay is shown in figure 15. The work in the cut and cover portion was the part that is most interesting. The ground was wet sand and mud, with a strong inclination to run. When the work was commenced by the ordinary method of excavating for the side walls, it was found that the wet sand ran into the trenches, endangering the houses, so that the following plan was adopted, which plan, with modifications, has also been successfully used in the two new roads now under construction. Two rows of six-inch sheet piles, varying in length from 20 feet to 30 feet, were driven to clear the external lines of the tunnel when built, and the surface of the street was then raised and a safety arch of concrete was turned, the ends of which rested on the sheet piling. The cement was mixed in the proportions of one part Portland cement, one part sand and five

parts broken stone and bricks. Inasmuch as the water could not be pumped without drawing sand, a drain was constructed immediately above the rock, which gradually drained the sand, permitting the tunnel to be completed beneath the safety arch and between the piles, all of which is shown by figure 16. The work of excavating beneath the arch was carried on from pits, sunk about 180 feet apart, space having been left in the concrete When rock did not occur for a bottom, a concrete invert was turned between the side walls.

The barricade for driving the piling inclosed a space 100 feet by 40 feet, and was never more than three weeks opposite any one point.

There are four stations on the urban portion of the line, distant from each other 2,400, 4,100 and 2,600 feet. These stations are constructed wholly or partly open at the top; the Charing Cross station has part of its length under cover, the regular tunnel section of figure 15 being widened, as shown in figure 17, to give the necessary accommodation. The distance from the service to the platform level being 20 feet to 30 feet the stations do not require elevators. There are no special or mechanical means of ventilation. The longest piece of tunnel is 3,500 feet, between the Charing Cross and Queen street stations.

The following thermometer readings were made by me to determine the comparative surface and underground temperatures:

Time, 6 p. m.

, -	Degrees.
Glasgow streets	65
Railway car compartment	68
Open country atmosphere, train running	64
Short tunnel atmosphere, train running	70
Long tunnel atmosphere, train running	73
Queen street station platform	64

From these figures it will be seen that there is a decided elevation of temperature in the tunnels, due to the air becoming heated by the passage of the locomotives, the rise in temperature being greater in the longer tunnels.

This line was built to carry the ordinary trains and engines of the North British Railway, so that it is worked by steam locomotives.

The total cost of the undertaking was as follows:

Parliamentary and legal expenses	£53,478	00
Construction, damage claims, engineering	404,708	00
Property, £398,304, but deducting value of surplus		,
property	248,577	00
Total	£706,763	00

This represents the total cost, exclusive of equipment of 3.123 miles of double track railway, but deducting the cost of 1.365 miles in the open, amounting to £118,600, there remain £588,163, as the cost of 1.758 miles of city underground railway built through very difficult ground. This is at the rate of £334,000 per mile.

The Glasgow Central Railway.—In 1888, a bill was passed authorizing the Caledonian Railway to construct the Glasgow Central Railway, in order to get a line directly through the city, connecting with its existing lines on the east and west sides. The road is double track, 6.4 miles in length. The subsoil of Glasgow consists largely of mud, clay and sand, the latter generally saturated with water and frequently partaking of the nature of quick-sand. Such material greatly increases the difficulty and expense of underground construction. The engineers, after full consideration, decided that it would be better and more economical to keep

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the structure as close to the surface of the street as possible, and to avoid tunneling. The only tunneling work done was at the west end of the city, through the hilly district in the neighborhood of the botanical gardens, where three tunnels were driven, aggregating 4,500 feet in length.

The good judgment of the engineers in adopting the cut and cover method of construction is shown by the fact that nearly all cases of settlement and damage to the street occurred where the tunnels were being made. These tunnels were driven not by means of a shield, but by the ordinary methods of timber supports. The actual amounts of the different kinds of construction are shown by the following table:

Tunnels	0.84
Cut and cover	3.13
Open cut.	2.41
Total	6.38

Cubic yards of excavation, 1,180,165.

The typical section, whether in tunnel or in cut and cover, is a brick arch, supplemented with a concrete invert wherever the ground was soft. Along a part of the cut and cover portion where it was desired to keep the depth of the structure as shallow as possible, the arch roof was abandoned in favor of a flat roof, consisting of plate girders with jack arches between them. These typical sections are shown in figures 18 and 19, and a longitudinal section of the latter in figure 20.

The greater part of the cut and cover work, which was the most difficult and consequently the most interesting, was done along Argyle street and the Trongate, the busiest thoroughfares in Glasgow. These streets are distant about one-fourth of a mile from

the river Clyde and run substantially parallel with it. The minimum depth of the flat top section from the surface of the street to the bottom of the concrete invert is 23 feet, which depth interfered with all sewers crossing the route. It was therefore necessary, before commencing the construction of the railway, to rearrange the sewerage system for a distance of about 2½ miles. This was done by building large intercepting sewers in the adjacent streets, practically parallel with the railway, and locating outfall sewers at a few convenient points, crossing the line of the railway just below the bottom of the invert. Sewers draining the houses were rebuilt in duplicate, one on each side of the street, connecting with the nearest cross line.

The water and gas pipes encountered in Argyle street were one 36-inch water and two 12-inch gas mains. The former, with the consent of the city officials, was removed and replaced with two 9-inch pipes, one on each side of the street, while the two 12-inch gas pipes were moved into similar positions. As a general thing the water main was placed on top of the wall, immediately at the end of the roof girders. Holes in the webs of the cross girders were left to carry additional pipes or electric wires to be laid in the future, if needed, and to avoid the necessity for tearing up the street.

Argyle street is 75 feet in width between the house lines and 45 feet between the curbs, with a two-track horse railway. The surface of the street is about 28 feet above tide. In the act granting the powers of construction, the Glasgow authorities had introduced clauses limiting interference with the street traffic. This latter, on streets like Argyle, was not to be interrupted except between 12 p. m. Saturday and 5 a. m. Monday, during which hours all tearing up of the streets was to be done.

To allow the removal of excavated material, special openings were permitted, limited, however, in area to 50 feet in length and 17 feet in width, of which not more than three feet were to encroach on the sidewalk, and the minimum distance between such openings was 200 yards. No such opening was to remain unclosed for a period exceeding twelve months without special permission. On the less important streets the company was allowed to tear up a portion of the street surface at a time, but such surface had to be restored within three months.

In order to comply with the requirements of the act along Argyle street, excavation for the side walls was first made along the curb lines. At the outset the trenches were protected on the house side by sheet piles 6 inches by 12 inches, driven to a depth of 25 feet to 32 feet. A pile driver with a frame spanning part of the roadway was especially designed for this purpose. It was found, however, that the driving of the piles jarred the adjoining buildings, and a system of sheathing, put in place as the shaft was sunk, was adopted. the walls had been carried ahead sufficiently, a section of the roof would be laid between the allowed hours, 12 p. m. Saturday and 5 a.m. Monday. At the former time the workmen would commence to tear up the paving and excavate sufficiently for the cross-girders. These would be put in place, the jack arches turned, and then the paving restored. The greatest number of girders thus laid in one day was seventeen, although ordinarily four were so set. After the roof was completed the unexcavated material was removed at the contractors' convenience. This was done by elevating it to the street level by steam cranes, and dumping it into carts to be removed to the spoil banks. These cranes, one of which is shown in figure 21, had a capacity of three tons, and a reach of 16 feet. They were also used on Sundays to carry forward and lower in place the roof girders. The material was deposited on some low ground belonging to the city, a charge of sixpence per load being made for the privilege. Some of the soil along Argyle street was so wet that it had to be drained in advance by a circular lined drain, 4 feet 6 inches in diameter, driven by means of compressed air beneath the tunnel level. This drain lowered the level of the ground water from 12 feet below street grade to 18 feet or 19 feet.

The foundations of the houses along the route are generally at a depth of from 8 feet to 11 feet. Wherever the excavation came close to the walls, or wherever the ground was very bad, these walls were underpinned. At one point the foundations of some buildings were very successfully underpinned to a depth of 20 feet, which was done in lengths of 3 feet 6 inches at a time. At the easterly end of the line, where it joins one of the branches of the Caledonian system, a retaining wall of the latter 35 feet high was carried down 20 feet further and permanently braced as shown in figure 22.

The tunneling at the west end of the line does not call for special comment. It was completed by some ingenious expedients through a very heavy ground with more or less subsidence of the surface above. At one point the line was crossed by a large water main, which was supported in advance of the tunneling operations on masonry piers. Brick was freely used in construction, the walls and arches being generally made of that material. In order to prevent moisture soaking through, vertical blind drains of broken stone 9 inches by 9 inches, in section, were built every 9 feet connected at the bottom with a 4-inch pipe as a weeper, which delivered into a 12-inch central drain of earthenware pipe

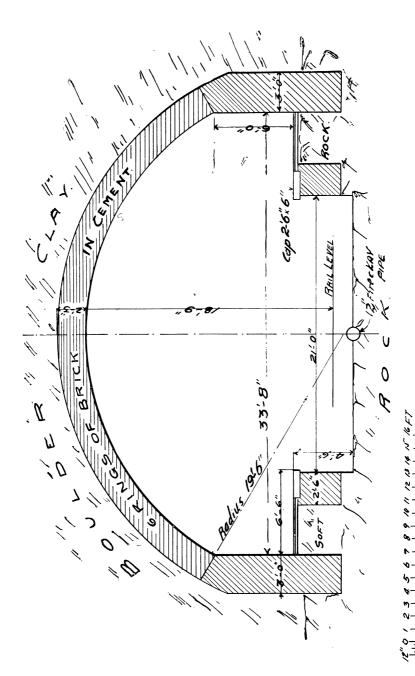
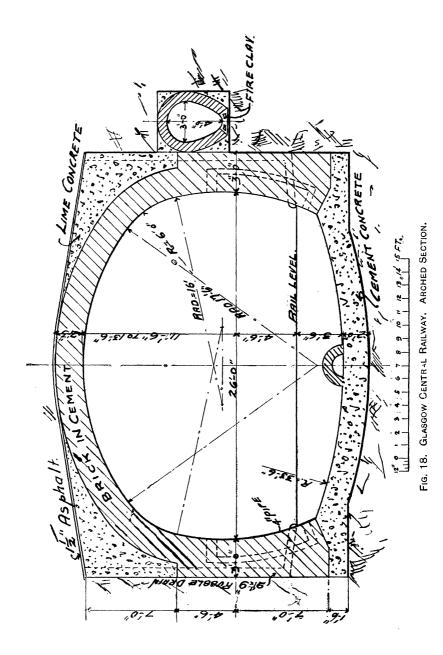


FIG. 17. GLASGOW CITY AND DISTRICT RAILWAY. STATION CROSS-SECTION.









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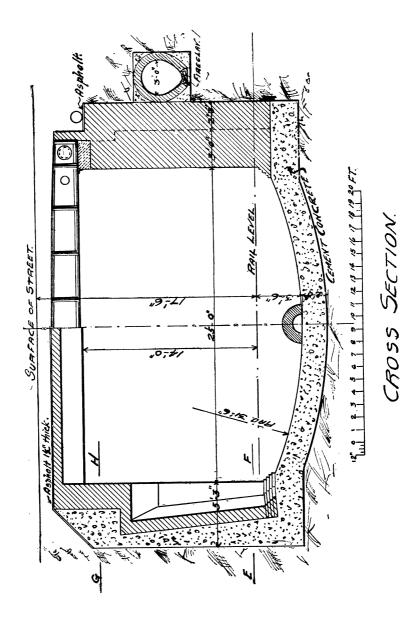


FIG 19. GLASGOW CENTRAL RAILWAY. FLAT-ROOFED SECTION.





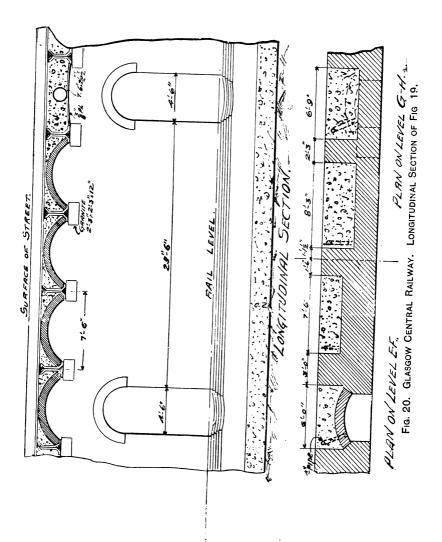










Fig. 22. GLASGOW CENTRAL RAILWAY. DALMARNOCK STATION UNDERPINNING.



(see figure 19). Generally the road is self-draining, as connection is made with the outfall sewers previously mentioned, as they pass under. At the Central station, however, and for some distance on either side, this is not possible, and a sump has been built there from which drainage will be pumped into the sewers.

The track consists of "bullhead" rails, weighing 90 pounds per yard, set in 45-pound cast iron chairs on creosoted Baltic fir ties. These ties are 5 inches by 9 inches, by 8 feet 11 inches long, set 2 feet 8 inches center to center. Ballast consists of broken stone. This track is a fair sample of standard English practice.

The maximum gradient is 1 in 80 (1.25 per cent.), and the radius of the sharpest curve is 858 feet.

There are twelve stations, including the main termini and the terminus of the Marvhill branch. The average distance apart is therefore about half a mile. The greatest distance is one mile, where the line in a deep tunnel passes beneath West End park, and the shortest distance is five-sixteenths of a mile. As far as possible all stations were made uncovered, only three being entirely roofed over. Five are partly underground, and four are entirely in the open. The general dimensions of the stations are a length of 600 feet, and a total width of 47 feet, giving two platforms of 13 feet wide each and a track space of 21 feet. One station has an island platform 30 feet wide. The station walls and roofs are lined with white enameled bricks. No attempt has been made at architectural treatment or ornamentation of the station works beneath the street surface. It is probably that the exterior of the station buildings will be designed with a view to give a pleasing effect. Figures 23, 24, 25 and 26 are from photographs of some of the stations and illustrate not only the design of the

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latter but also the general method of the design and exterior finish of the railway. The various forms of brick and masonry arches, gider construction, jack-arches and the use of enameled bricks and cast iron columns are shown. The large arch shown in figure 25 has a span of 47 feet. During the construction more or less claims for damages have been made. Along the route where tunneling was done there has been some settlement of the surface. In the open excavation work the most serious case of damage was where two lengths of sheet piles were used one on top of the other in a deep excavation for a sewer, being built off the line of the railway. An extraordinarily heavy rain washed out the filling through the cracks where the piles met, and disturbed the foundations of the abutting houses. Many suits have been brought by property owners for damage by reason of obstructions, etc., but in nearly all cases such suits have been decided in favor of the company, except where the legal limit of the allowed time for keeping the streets open was exceeded. Under the English law no damages can be collected for ordinary obstructions, on the principle that the company has the right to do the work and such obstructions are especially admitted in the act, although the company selects the site. This principle is well illustrated by a decision rendered in a suit brought against the City and South London Railway for damages by reason of the establishment of the power station on property adjoining an orphanage, which was thereby rendered uninhabitable. The case was decided against the plaintiffs on the grounds that the company had statutory power to carry on the undertaking, and was therefore permitted to do anything necessary to that object, even if it proved a nuisance, provided reasonable skill was used in the arrangements. An examination of the decisions in all the cases

decided against the company shows that Glasgow justices and juries award only actual damages sustained and nothing of a punitive or extraordinary nature.

The road will be operated by steam locomotives of the condensing type, as the trains will come and go to a distance on the surface lines of the Caledonian Railway. Blow holes in the covered portions will be relied on for ventilation, except in one place where for a distance of 3,000 feet it will not be possible to construct an opening. At this point a 20-foot ventilating fan will be erected. The largest stretch between blow-holes or other openings will be 1,900 feet, except in a tunnel 2,800 feet long, both ends of which, however, will be open.

The contract price for the work, without equipment and station fittings, is £1,020,000; the sewer and pipe alterations have cost £300,000, and land and other expenses will amount to about £500,000; making a total of about £1,900,000, or say £300,000 per mile. It is instructive to note that the original estimate of the engineers was \$1,005,000, a variation from the contracts, as actually let, of less than $1\frac{1}{2}$ per cent.

The contract prices for the more important items are as follows, prices reduced to dollars:

Removing and replacing street surface, per square yard,		
\$3.75 to	\$ 4	25
Concrete (one part cement, three sand, three stone) per		
cubic yard	4	25
Brickwork in cement, walls and arches	6	87
Brickwork in cement, jack-arches, per cubic yard	7	50
Brickwork enamel, extra, per square yard of face	2	50
Rubble masonry, per cubic yard	3	75
Rubble masonry, extra, exposed face, per square yard		7 5

Granite masonry, per cubic yard	\$ 36 00
Excavation (cut and cover), per cubic yard	1 25
Excavation for underpinning, 6 feet deep, per cubic	
yard	2 50
Excavation for underpinning, 12 feet deep, per cubic	
yard	3 12
Excavation for underpinning, 18 feet deep, per cubic	
yard	3 75
Excavation for underpinning, 24 feet deep, per cubic	
yard	4 37
Excavation for underpinning, 30 feet deep, per cubic	
yard	5 00
Excavation, tunnel in clay, lining included, per lineal	
yard	300 00
Excavation, tunnel in rock, lining included, per lineal	
yard	250 00
Iron plate girders, per pound	4
Track ballast, per cubic yard	. 75
Track cross-ties, each, \$1 to	1 25
Track-laying, per mile	440 00
=	

The material from cut and cover excavations was removed by carts through the streets, the average haul being less than one mile. The price for the tunnels includes the lining as well as excavation. Separating them and allowing for the former the regular rate given above, the price for excavation alone was \$2 per yard for clay and \$2.80 for rock. The contract price for the girders is higher than what such work can be obtained for now, the present price being about 3 cents per pound.

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The Glasgow District Subway is a line built for a purely local traffic and has no connection with any other road. It is circular in plan 61 miles long, with two tracks. Generally speaking, the line is at a considerable depth below the surface, requiring tunneling, and each track is in a separate tunnel. The route, as far as possible, follows street lines. It passes through all sorts of material, from quicksand to rock, and crosses under the river Clyde twice. The mode of construction most generally adopted on account of the nature of the ground was two cast-iron lined tubes, as shown in figure 27, which is also the section used in the river crossings. In the driving of these tunnels a shield was employed, but it was used more as a safety appliance than as an excavating tool. Progress was made by driving an ordinary timber supported heading some distance in advance of the shield. The ground on the sides of the heading was opened out and a circular section formed, with a diameter slightly greater than that of the shield. walls of this excavation were most carefully secured by poling boards, all joints and cracks being stuffed with clay. Into the excavation thus formed the shield was forced by hydraulic jacks 18 inches, the width of a ring, at a time, and then the cast-iron plates were put in place and grouted at the back in the usual manner. It was found that this method of proceeding gave more satisfactory results than supporting the face by the shield itself, as is generally done. The average rate of progress was three rings, or 4 feet 6 inches per day of three shifts of eight hours each.

All the iron-lined work was constructed by the aid of compressed air, a pressure of 28 pounds being used in places. Much of the work was very difficult. Neither the longitudinal nor circular joints in the iron sections were planed or machined at all. but a recess was made in the castings, in which strips of wood

These strips make a cheap but serviceable joint. The tubes were generally driven at a distance apart from 3 feet to 6 feet, but in some instances they actually touch. At the river crossing, the minimum earth cover was 15 feet at the banks and 20 feet in the middle of the stream. A vertical curve with a radius of 5,000 feet was adopted as the profile of the lighment beneath the river.

In rock, two horseshoe-shaped tunnels as in figure 28 were used, calling for no special comment. Along a certain part of the route, where the rail level was not sufficiently beneath the surface as to make tunneling necessary, the following ingenious method of cut and cover work was employed, shown in detail in figure 29.

The ground was wet and very soft, and ordinary excavation between sheet piles could not be made without endangering the abutting houses. According to the plan adopted, the surface of the street was removed and two rows of 4-inch sheet piles driven. The ground was then excavated between the piles to a depth sufficient to turn the double arch of concrete, which was at an elevation above the level of standing water. The street sewer was also removed and rebuilt, as shown, on the completion of which the surface of the street was restored. When a sufficient stretch of roof had been completed, the work of removing the remaining material was commenced under compressed air with a moderate pressure of from 2 to 5 pounds. The concrete invert was next turned, and finally the roof underpinned with the brick sides and center wall. Manholes, 3 feet wide by 5 feet high, connecting the two tunnels and serving as refuge niches, were left in the center wall at distances of 75 feet.

There will be 15 stations at an average of slightly more than four-tenths of a mile apart, the greatest distance being five-

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eighths of a mile and the least three-eighths of a mile, so that the spacing is very unform. Nearly all of them are at least partly open at the top. The platform level varies from 18 feet to 32 feet below the street grade, and elevators are not considered necessary. The stations are of the same size, being 150 feet long, with island plaforms 10 feet, and stairways 6 feet to 8 feet wide. Although the stations are all similar in general dimensions, the details of the method of construction vary according to the nature of the ground. Figure 30 is a cross section of stations in rock or firm ground, while figure 31 illustrates the design in soft ground, where the safety arch of concrete was first laid by cut and cover. From these drawings it is seen that the station consists of an arch spanning both tracks and the platform. At the ends of the station is finished square with a brick wall, from which the pair of tunnels commence as indicated. The equipment is to consist of two car trains, each car being 40 feet long, with end doors and longitudinal seats. The motive power will be a cable $1\frac{1}{4}$ inches or $1\frac{1}{2}$ inches in diameter, running at a speed of 15 miles per hour. The line will be operated 18 hours daily, from 6 a.m. to 12 p.m. The fare for any distance will be 1 penny, without distinction of class.

The novel arrangement in the working is that there will be no sidings. At the point where the rail level is at the least depth there will be an elevator, by which the cars can be lowered to or raised from the tracks. It is proposed at the commencement of operations to have but one-half as many trains as stations, to be increased in number as needed. At night when the road stops running, the trains will be left at various stations around the circle, where they will be inspected, cleaned and repaired. In the event of a breakdown, the following train will push the disabled train to the elevator, to be removed from the line. Under normal

working, no train will leave a station until the preceding train has left the next station ahead. The cars will be lighted by electricity, which will be supplied by a wire and contact brushes. The motive power being a cable, gradients as steep as $5\frac{1}{2}$ per cent. have been used, and artificial ventilation is not considered necessary.

During the progress of the work there was a number of accidents, most of them small, however. The most common trouble was the starting of leaks in water mains and sewers, where tunnel operations were being carried on, which caused the street surface to settle or cave in. In some instances there were blowouts of the compressed air. The most serious piece of damage was the cracking of two houses at the corner of New City road and Abercorn street, which is so singular as to merit recording. This part of the route lies in solid rock, through which the tunnels were being driven with supposed security, when the houses mentioned settled. An examination showed that the site of these houses was an old forgotten quarry, which had been subsequently filled with loose stones, which were shaken down by the jar from the blasting. Construction was commenced in 1891, and will be completed during the coming year at a cost of about £750,000 for the work, exclusive of land or equipment, of about £115,000 per mile. Of the cost, the principal item is the construction of the iron tunnels. These were contracted for at the rate of £80, say \$400, per lineal yard of double tunnel.

The cast-iron weights per yard, 6 tons, 3 cwt., and cost at the foundry £4 2s. 6d. There were 25.13 cubic yards of excavation, which, therefore, cost, including the delivery and settling of the iron plates, \$10.86 per cubic yard. It is to be remembered, however, that this work was done under a high air pressure and through very bad ground. The excavated material was removed

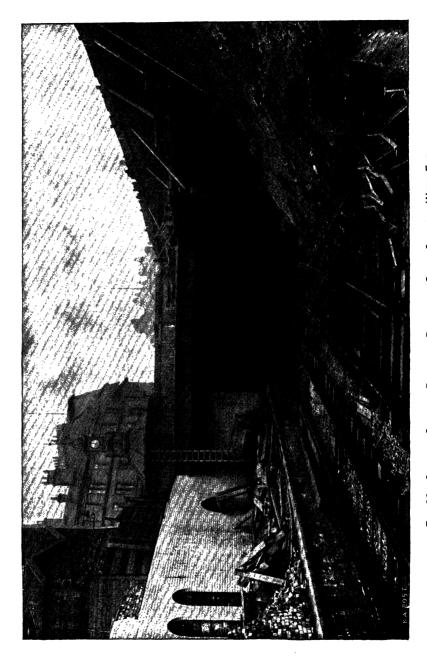


FIG. 23. GLASGOW CENTRAL RAILWAY, BRIDGETON CROSS STATION-WEST END.





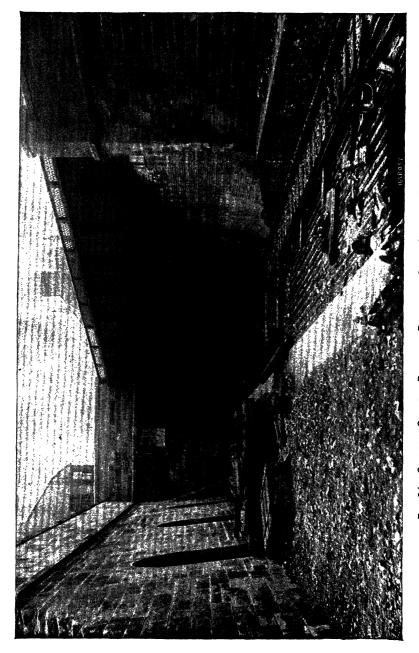


FIG. 24. GLASGOW CENTRAL RAILWAY. BRIDGETON CROSS STATION—EAST END.



Fig. 25. GLASGOW CENTRAL RAILWAY. GLASGOW GREEN STATION.





FIG 26. GLASGOW CENTRAL RAILWAY. QUEEN'S DOCK STATION.





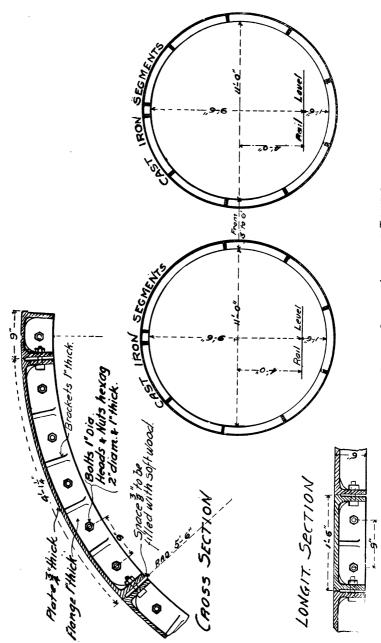


FIG. 27. GLASGOW DISTRICT SUBWAY. IRON-LINED TUNNELS.



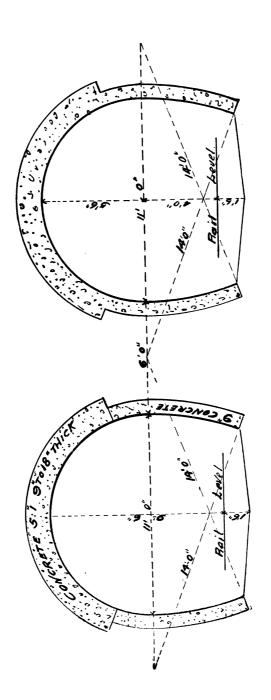


FIG. 28. GLASGOW DISTRICT SUBWAY. TUNNELS IN ROCK.



by carts outside of the city, an average distance of about two miles, at a cost of about 1s. 6d. per cubic yard for the haul alone.

The Glasgow Harbor Tunnel, illustrated in figure 32, is a large three-tube tunnel built to give a passageway for vehicles and predestrians under the Clyde. On each shore a shaft 80 feet in diameter and 75 feet in depth has been sunk. Connecting the bottoms of these shafs are two iron tubes 16 feet in the clear and 720 feet long, which will have a paved roadway for vehicles. Access to and from these tubes will be had by six elevators in each shaft, running at a speed of 4 feet per which are now being erected by the American Elevator Company. It is interesting to note that the steel frame work for these elevators was made by an American rolling mill company, and exported to Glasgow. A third tunnel, which is of the same diameter and similar construction to the others, will start from the top of the shafts on both sides. tube is for pedestrians only. The inclines at the ends with gradient of 1 in 3 will be stepped. This large work is nearly completed, great difficulties having been successfully overcome. Compressed air was used with a pressure of 28 pounds in which men worked during four hour shifts, an average monthly progress of 60 feet being made. The contract price per lineal yard of each tunnel was £80, including the excavation, and the furnishing and setting of the iron. In each lineal yard there are 5 tons, 5½ cwt. of cast iron and 25.29 cubic yards of excavation. The former cost £6 per ton, delivered on the site, so that the latter, including however, the handling and setting of the plates, cost about \$8.98 per cubic yard reckoning as before \$5 to the pound.

LIVERPOOL.

The Liverpool Overhead Railway was opened for traffic on March 6, 1893. This line has now a length of 6.05 miles of double track running through the Liverpool dock property parallel with the river. In construction it is an elevated railroad, differing from the usual American practice, however, in that it has a solid iron floor, composed of steel troughs. The great feature of this road is the electrical operation.

Figure 33 shows very distinctly the general construction of the structure, the road-bed, and the typical station arrangements. The track is supported on steel troughs or arched plates 22 feet long, 5-16 inches thick, 2 feet 6 inches span, and 1 foot 3 inches rise. These plates are riveted to the webs of the main supporting girders, which are everywhere of the "through" order, and usually 50 feet long, the top flange being used as a foot walk. The track rail is of the T section, weighing 56 pounds per yard.

At the time of my visit there were 14 stations, including both terminals, but others were already under construction. The business of the road is a purely local one, and it is considered that the patrons will be best served with frequent stops. The station platforms are 120 feet long and 10 feet wide, with two stairways, one at each end, for exit and entrance respectively. The ticket seller's office is located at the head of the latter. The shortest radius is 462 feet, while the gradients with one exception are light. This is where the line is dipped with two converging gradients of $2\frac{1}{2}$ per cent. in order to pass under another railway. The depression is short, and the acceleration gained on the descent assists the trains on the ascent.

The electric power plant has been established at a point about midway in the line, where the opportunity to get coal direct was No. 98.] • 1659

skillfully embraced. At this place a branch of the Lancashire and Yorkshire Railway runs down to the docks to handle its coal traffic. For some distance the branch runs parallel with the overhead railway on a viaduct of brick arches. The latter has installed its power plant in ten of these arches, as shown in figure 34.

The boilers are located in the four arches with the large doors in the foreground, while the machinery occupies the next six which are enclosed with windows. Coal is dumped from the coal cars overhead into bins over the boilers, and thence fed to the grates by a system of conveyors and mechanical stokers, so that it is never touched by hand.

The power plant was designed to meet the specifications of twenty trains of three minutes headway, and accomplishing the distance of six miles with thirteen stops of 30 seconds each in 29 minutes. This requires an average running rate of speed of 16 miles per hour, with 30 miles as a possibility. It was estimated that this service would require from 1,200 to 1,400 amperes at a pressure of 500 volts, or about 900 engine horse-power. This was divided into three units of 475 amperes and a fourth was added so as to keep one always in reserve. The steam portion consists of six boilers 8 feet by 30 feet carrying 130 pounds steam pressure, and four compound condensing engines of 400 horse-power, the dimensions of the cylinders being 15½ and 31 inches, with 36-inch stroke. Each engine drives a dynamo by means of nineteen 11 inch cotton ropes. City water is used for steam, and river water for condensing. The coal burned is a poor grade of slack, costing about 7 shilings 6 pence per long ton. No complete and extended determinations for the efficiency of the plant have been made, although certain claims have been made that the dynamos deliver 88 per cent. of the power generated. These figures are undoubtedly high. The general managers state that in actual working the efficiency of the dynamos is about 80 per cent. and that of the whole line about 60 per cent.—very satisfactory results.

The trains consist of two cars, each 45 feet long, seating 16 first and 41 second-class passengers. One of these cars is shown in figure 35. There are no separate locomotives, the truck of each car being a moter truck and capable of delivering 70 engine horse-power continuously without heating. All gearing is avoided, the armatures being attached direct to the axle. The current is supplied through a steel channel with 4 square inches of section laid between the rails. See figure 33. The cars are lighted by 32 candle-power incandescent lamps, taking electricity from the main current. The stations are lighted by similar lamps, fed through accumulators. Westinghouse air brakes are used, each car having a reservior charged at the end of every round trip. The trains are run by two men only, a driver and a conductor.

At one end of the car is a small compartment containing the governing electrical apparatus. Then follows the second-class compartment and at the other end of the car is the first-class compartment. Trains are made up so that the two first-class compartments come together, with the electrical compartments at the front and rear ends of the trains. The train is so wired that both motors can be controlled from either end. The advantages of such an arangement are many. The weight of the passengers and of the cars are utilized to give adhesion, so that in the Liverpool train the additional weight of the moters and mechanism amounts to 6 tons 7 cwt. as against 13½ tons for the locomotives on the City and South London, which is of especial benefit to an elevated railroad, as the structure need not be built to carry heavy concentrated weights. In general operating it is also a convenience, as

No. 98.]

no switching, changing of moters, or reversing of trains on a loop is required at the terminal stations.

While the passengers are getting off and on, the moterman locks one compartment, and with his electrical handle he goes to the compartment at the other end of the train and is immediately ready to start on the return journey.

The road is operated week days from 5.30 a. m. to 9.30 p. m. at from 5 to 10 minutes headway with a maximum of 16 trains in service. On Sundays the hours of operation are from 11.35 a. m. to 9.30 p. m. The schedule speed is 28 minutes, giving an average, stops included, of 13 miles per hour. These latter occupy from 5 to 30 seconds each, with an average not exceeding twenty seconds. The fares are as follows for any distance: First class, 3 pence; second class, 2 pence, with a discount of 10 per cent. for books costing £1 and over. During the morning hours return tickets are sold for $4\frac{1}{2}$ pence and $3\frac{1}{2}$ pence respectively. Passengers are recorded by a turnstile as they pass the ticket agent. Only first-class passengers receive tickets, which are collected on the train by the conductor.

The agent therefore has to account for the number of persons recorded by the turnstile, the amount in money being shown by the number of first-class tickets sold plus the balance of the passengers at 2 pence each. Trains are moved under a complete system fo block signals which are worked automatically by electricity.

The financial results of electric working are even more satisfactory than in London, due largely to the advance in electrical equipment, and the fact that water can be obtained for condensing engines in the power house. The contractors under their original guarantee were to run the trains for two years at a cost not exceed-

ing 3½ pence per train mile for all expenses connected with the running power. At the end of ten months the company put an end to the contract and assumed operation, saving money thereby, as during the half year ending June 30, 1894, 265,349 train miles were run at an expence of £3,179 11 shillings 6 pence or an average of less than 3 pence per train mile.

The consumption of coal per train mile is very moderate. During the first month of operation it was 25.16 per train mile; in the second 20.03 pounds, and in the third, 18.97, and afterwards by a steady decrease to about 17 pounds. During the month preceding my inspection (July), 51,584.02 train miles were run on 404.25 gross tons, an average of 17.55 pounds per train mile. This amount includes the coal consumed in lighting the cars and working the electrical signals, which amount is estimated to be about $2\frac{1}{2}$ per cent. of the whole. The weight of a train with an average load is about 42 tons.

The cost per mile of the road complete is divided approximately as follows for the first 5 1-3 miles.

Structure	£59,000
Stations.	4,600
Electric Plant	7,700
Rolling stock, including motors	5,000
Alterations, dock lines, streets, etc	13,800
Parliamentary and legal	4,400
Average cost per mile	£94,500

The Mersey tunnel.—The work of building this double-track railway, 4.1 miles long, to connect the several railways on both sides of the Mersey, was commenced in 1881 and finished in 1886.

No. 98.] 1663

The design of the tunnel itself presents no specially novel features. The section is a brick arch with a span of 26 feet, the ground during the construction being held by timbers. Much water, however, was met with in construction, and still continues to seep into the tunnel at the rate of about 10,000 U. S. gallons daily, requiring constant pumping.

The interesting feature is the ventilation, this being the only tunnel or underground railway where there is a complete system of mechanical ventilation. There are two stations, 1.2 miles apart - Hamilton square, in Birkenhead, and James street, in Liverpool — which are completely underground. At the surface at these points ventilating fans are located, which connect with a circular ventilating heading 7 feet in diameter, which has cross openings at intervals into the tunnel. The fans, working on the vacuum principle, draw air from the tunnel at these points, and fresh air to supply the deficiency passes down through the two The air is thus removed at the point where it is foulest, while the fresh air is introduced at the stations where it is most This is the proper method to pursue if mechanical ventilation is necessary. Figure 36 shows a profile and a cross section of the tunnel with the ventilating heading.

The above-mentioned stations are 400 feet long, with two platforms 15 feet wide, the whole being spanned by a 50-foot arch. Access to these stations is by means of three elevators, each holding 100 people. The rise is, respectively, 87 feet 8 inches and 76 feet 7 inches, and the time required for the elevator to make the ascent about 45 seconds. In addition there are stairways 7 feet wide and a subway 10 feet wide, the latter reaching the surface on an incline of 1 foot in 9 feet. Between the Hamilton square and James street stations the rates of fare are, first class, 2 pence; second

class, $1\frac{1}{2}$ pence, and third class, 1 penny; and a proportionate increase for longer distances, although the greatest traffic is between the points named. During the year 1893, 7,515,788 passengers, exclusive of season ticket holders, were carried, at an average fare of 2.04d. Of these, 10.8 per cent. were first class, averaging 3.79d. each; 27.1 per cent. second class, averaging 2.53d., and 62.1 per cent. third class, averaging 1.8d.

The engines are of the condensing type, burning the best quality of Staffordshire coal, which is free from sulphur, at a cost of 13s. per ton. But in spite of this and the complete ventilating plant the air is still somewhat foul. The temperature of the tunnel is somewhat affected by the locomotives, as shown by the following thermometric readings:

Liverpool surface	Degrees. 65
James street station	69
Tunnel proper.	67

The cost of operating the ventilating, pumping and elevator plants comprises from 20 per cent. to 25 per cent. of the total operating expenses. The hydraulic elevators alone cost £2,500 per annum for fuel and attendance. Supposing that they are used by half the total passengers, a generous allowance, the cost per passenger using them would be nearly one-sixth pence or one-third cent, an appreciable figure.

The cost of constructing this tunnel, including land and equipment, was about £500,000 per mile.

BERLIN.

The Stadt-Bahn.—In 1872 there was projected a railway to pass directly across the city of Berlin. Previous to that there had been constructed a circular railway, surrounding the city, called

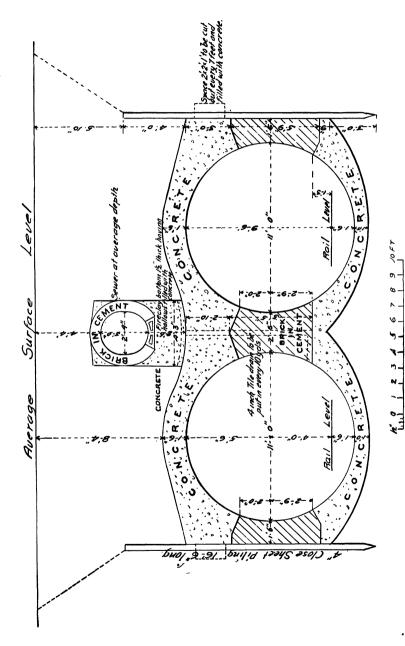
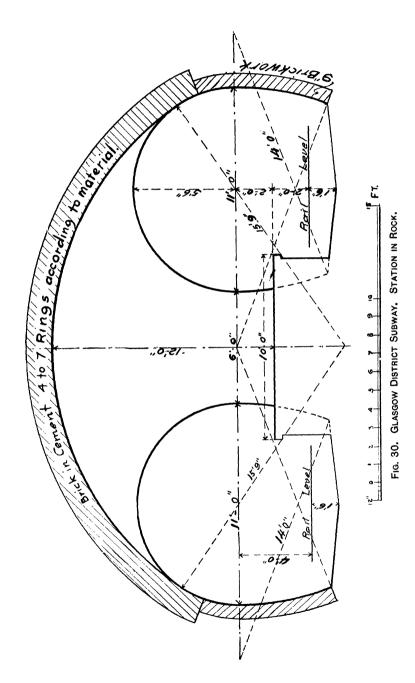


FIG. 29. GLASGOW DISTRICT SUBWAY. CUT AND COVER CONSTRUCTION.











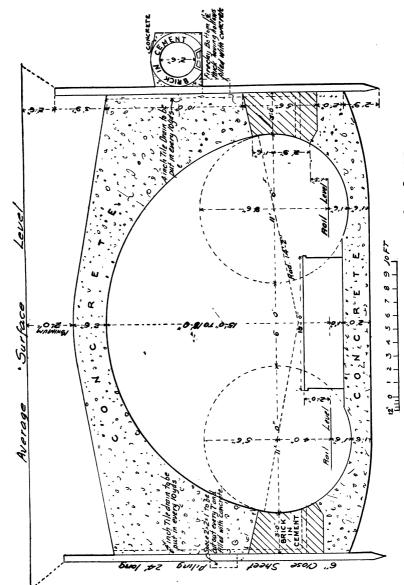
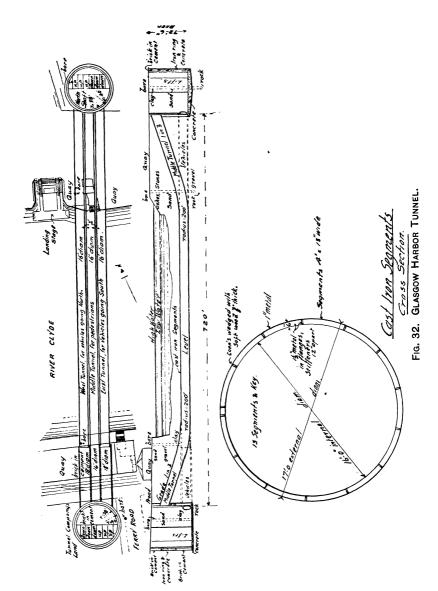


FIG. 31. GLASGOW DISTRICT SUBWAY. STATION IN SOFT GROUND.





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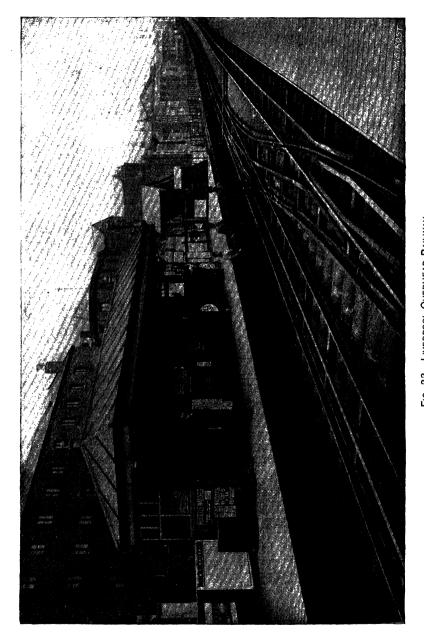


FIG. 33. LIVERPOOL OVERHEAD RAILWAY.



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FIG. 34. LIVERPOOL OVERHEAD RAILWAY. POWER HOUSE.



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the Ringbahn, a surface line, with no special constructive features. This, like other similarly located lines, had not met the needs of the people. After considerable study it was decided to make the new railway, after called the Stadtbahn, an elevated one, and to build it wherever possible on masonry and earthwork, using iron for the street and river crossings. A right of way was purchased and houses demolished. The work proceeded slowly until 1878, when it was found to be too expensive for private capital, and its completion was undertaken by the German government primarily as a military expedient, to facilitate the movement of troops to, from and through Berlin. It was opened for traffic in February, 1882. Its length of 7.55 miles is divided among the several methods of construction as follows:

Masonry arches, including stations	4.95
Iron superstructure	1.13
Earth embankment	1.05
Earth between retaining walls	.42
Total	7.55

The extreme width of the viaduct is 50 feet 10 inches, and the arches generally have a span of about 40 feet. The track is laid in the usual manner, on gravel ballast.

In carrying out this work three points were kept in view: first, to have ample accommodations at the stations; second, to make all construction as solid as possible; third, to give the whole an attractive appearance, as the line traversed one of the most populous parts of Berlin. The accompanying illustrations show how these features have been accomplished.

[Assembly, No. 98.] 105

There are four tracks, two for local trains, which, at the terminal stations, alternate in running around the north or the south half of the Ringbahn, into which the Stadtbahn divides the circle. The other two tracks are for through trains, coming from a distance to pass through Berlin to some destination beyond. The local tracks are together on the north side, and the express tracks on the south side of the line.

The stations, including the terminals, are 10 in number, of which the terminals and three others are arranged for both local and through trains, and at these stations baggage is received. All the stations have arched roofs of iron and glass. In the case of the local stations the roof covers but the two local tracks and their platform, while in the other type the roof in one span covers all the tracks. In the first case the span is about 56 feet, the platform ranging from 26 feet to 30 feet. Of the combined stations the largest is the Friedrichstrasse station, whose length is 508 feet and clear width 125 feet, with 36 feet platforms.

In all cases the platforms are island ones. The staircases have a minimum width of 8 feet 4 inches.

The road being raised, the stations are two stories in height. On the ground floor are located the ticket offices. At the top of the ascending staircase and before going on the platforms, tickets are inspected and punched, but they are not given up except on leaving the alighting station. The basis of the rates of fares differs in principle entirely from that of any of the other roads that have been considered. In their practice there was either a fixed fare for any distance or else a charge based on distance and varying from station to station. On the Stadtbahn there are two classes and two fares for each class. The lowest is good for a ride not exceeding six stations, and the higher for a longer journey.

The former for the third class is 10 pfg. (2.4 cents) and the latter 20 pfg. (4.8 cents), while for the second class the fares are, respectively, 15 pfg. (3.6 cents) and 30 pfg. (7.2 cents).

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There is no first class. The greater number of passengers ride third class. Trains run from 4.30 a.m. to 12.30 a.m., at a minimum headway of 5 minutes and require 30 minutes to make the actual distance between the terminal stations of 7 miles at a speed of 14 miles per hour, stops included. These stops average 30 seconds each. The steepest gradient is 0.8 per cent. and the shortest radius 984 feet. Figures 37 and 38 are from photographs of the two largest stations. The former shows also the construction of the masonry arches and a very neatly designed hinged iron arch crossing the street (Friedrichstrasse). Many of the arches are rented, usually, as in the case illustrated, for a restaurant.

The cost of this road in United States money was:

Structure	\$ 9, 4 92,868
Right of way \$8,377,362	
Less value of surplus land 1,904,000	
	6,473,362
Total cost	• / /
Average cost per mile (7.55 miles)	2,114,732

PARIS.

In this city the only steam railway in operation for local traffic, except of course the trunk lines as they enter the city to reach their terminal stations, is the Chemin De Fer De Ceinture. This is a double track belt line about 20 miles long running around the city just within the ramparts. It is operated by the Chemin de Fer de l'Ouest, and starts from its principle terminus, the St.

Lazare station, but connects with all the other railways at their respective crossing places. All methods of construction have been adopted according to the topography—surface, open cut, tunnel and viaduct. Streets are never crossed at grade, but usually are carried over the railway. The only notable piece of construction is the viaduct of the Pont d'Auteuil over the river Seine, shown in figure 39, which is a two story bridge, the lower one for vehicles and foot passengers, and the upper one for railway.

In Paris the question of intramural rapid transit has been agitated continuously for the last twenty years without producing any tangible results, so that with the exception of the belt road above described, which does not benefit the central portion of the city, travel through the streets is dependent on cabs, omnibusses and tram cars. It is to supply better and more rapid means of locomotion, and especially to connect the outlying districts with the central and busy portions of Paris, that many schemes have been proposed. Apparently the most complete one and the one most likely to succeed is the construction of an inner circular line skirting the distance included between the Rue de Rivoli and the line of the principal Boulevards. This circle would be connected with the belt line (Ceinture) and with the district outside of the walls by extending the several trunk lines to a junction with it. Thus, a person coming from outside of Paris would enter the city by the nearest road, continue until he reached the inner circle, and then travel to the most convenient station; or, if he lived within the city or on the outskirts, he would travel by the belt line to the nearest principal line of railway and by it to the inner circle. inner circle, the belt line, and the radiating lines would thus form a figure like a wheel, of which the inner circle would be the hub,

the belt line the felloe, and the trunk lines the spokes. This proposition, however, has not yet passed the promotion stage.

Entering the city from the south there is now a small railroad called the Chemin de Fer de Sceaux, about seven miles long running to some suburban towns, and belonging to the large company, the Chemin de Fer d'Orleans. This little road has its terminus at the Place Denfert-Rocherau, where its passengers are deposited about one and three-quarter miles from the south bank of the Seine. Nearly three years ago the Chemin de Fer d'Orleans commenced work on an extension of its road under the Rue Denfert-Roucherau and the Boulevard St. Michel to the Gardens of the Luxembourg, which is now so nearly completed that it is expected to be in operation by January next. Although this line, which is double track, is but 6,240 feet long, yet as a model it is the most important piece of underground construction in Europe, as it is the only case where an attempt has been made to produce a really handsome structure.

Before commencing the construction of the railway, the water and gas mains and sewers along the route were rebuilt, which was done by placing them in duplicate on each side of the street and making the cross connections at convenient places above or below the tunnel as the locality permitted. The tunnel itself in general consists of stone side walls with a stone arch, as shown in figure 40. In a few places where head room was very limited, iron cross girders with brick jack arches were used. Two of the stations were built partly in open cut.

The proportions of the various forms of construction are masonry arch, 79.7 per cent., iron girder, 15.2 per cent. and open cut, 5.1 per cent. Towards the Luxembourg end of the road two side tracks have been added, requiring a width of 49 feet 3 inches,

which has been spanned by a single arch, as in figure 41. This section would resemble that of a four track road in New York, if designed with an arch roof.

As to the method of construction, the profile shows the rail level leaving the present track grade of the Chemin de Fer de Sceaux and descending on a 2.1 per cent. gradient so as to pass beneath the Place Denfert at a depth of 15 feet. Thence it continues to descend towards the river at a less gradient and reaches its maximum depth 34 feet beneath the surface of the street at the Luxembourg station. Along the whole route cut and cover construction was possible. This was done by first building the side walls and then turning the arch, one-half of the street at a time, leaving the other half free for traffic. The Boulevard St. Michal has a width between curbs of 46 feet and two sidewalks 26 feet 3 inches each. During construction street traffic, including a horse car line was accommodated on the half of the street and the sidewalk not yet encroached on. As soon as one half of the arch was completed, it was back filled, and street surface restored temporarily. The traffic was then moved over and the other half of the arch put in place. This method was followed not only with the arching, but also with the girders where they were used. The later were spliced at the center after being put in place. roof was built at the rate of 125 feet per week. The earth core which had been left untouched during construction was removed afterwards by train. The street pavement was permanently restored by the municipality, but at the expense of the company. There will be three stations. The junction with the Chemin de Fer de Sceaux at the Place Denfert, the Port Royal station in the square of the observatorie where crossed by the Boulevard Port Royal, and the terminus of the road at the Luxembourg. All of

these stations have been designed with great skill with a view to make them pleasing and attractive in appearance, and to afford the maximum of convenience to the passengers. The architectural treatment consists in the avoiding of flat barren walls, by furnishing them where not roofed, with a fine cornice and ornamental railing, and where in tunnel, by dividing them into panels by means of pilasters with a cornice and moulded base. These panels are covered with porcelain tiles, and the small arches in the station roofs are made with bricks of the same material. Porcelain was used instead of enameled brick, as it was feared the polished surface of the latter might be thrown off by frost.

To facilitate the movement of passengers there are two separate stairways to each platform, one for incoming and the other for outgoing passengers. The former connects with a passageway from the ticket office, the latter leads directly to the street. The exit passages are larger than those for entrance.

The Place Denfert station is partly open and is shown in figure 42, which illustrates the details of construction, the double stairways on both platforms, and the porcelain tiled panels and roof arches.

Figures 43 and 44 are two views of the Port Royal station taken from opposite ends. The excellence of the design and the workmanship speak for themselves. It is suggestive to compare these pictures, 42, 43 and 44 with the photographs, figures 23 to 26 of the Glasgow Central Railway. Without in any way intending to reflect on the latter, as it is an exceedingly strong and well built structure, nevertheless it conforms in appearance with the usual English practice, and is devoid of any artistic features. Figures 44 and 25 are views of two stations quite similar as to general plan, and of almost the same dimensions, the Scotch arch having a span

of 47 feet, and the French 48 feet 6 inches. The difference in appearance and in outward attractiveness is very striking. Figure 45 is a view from within the arch shown in figure 44, and looking into the railway tunnel beyond the station, which shows the quality of the underground work.

The Luxembourg station is the only one entirely underground, and is shown in section in figure 46. The length of all the platforms is 594 feet.

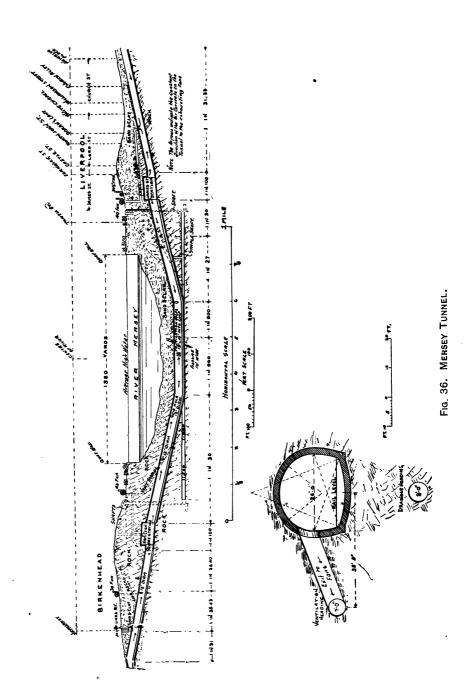
At the terminal stations arrangements will be made for the handling of baggage, which will be raised and lowered by elevators. Elevators will also be put in for the convenience of passengers at the Luxembourg. The station offices and waitingrooms at the first two stations will be located in buildings erected over the tracks, but at the Luxembourg in an ordinary house, bought by the company and remodeled to suit.

Inasmuch as the Chemin de Fer de Sceaux is operated by steam locomotives, and as the company does not care to change at present the method of working, the tunnel portion will also be operated by steam engines, and therefore mechanical ventilation has been introduced.

The Place Denfert and Port Royal stations being open, it has been considered that frequent blow-holes will sufficiently ventilate the stretch of tunnel 1,900 feet long between them. For this purpose holes have been left in the roof of the tunnel at intervals of from about 200 to 300 feet. Where these holes pierce the sidewalk ornamental glass and iron kiosks (figure 47), 8 feet by 5 feet in plan, are built. The upper part is an iron grating, through which the foul air will escape. According to Parisian custom these kiosks will be covered with advertisements. In the interior of the tunnel proper, in figure 45, can be seen one of the blow-hole

Fig. 35. Liverpool Overhead Railway. Motor Car.





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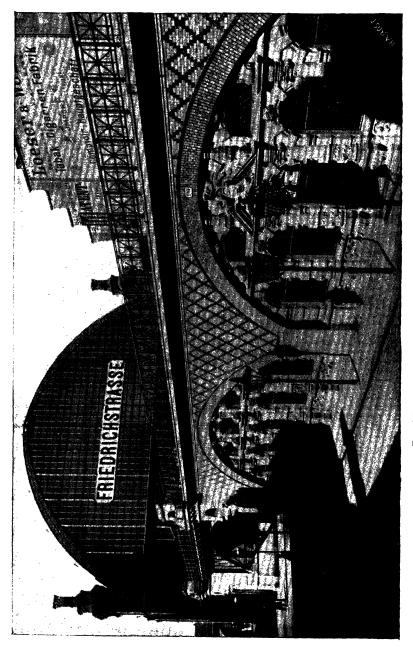


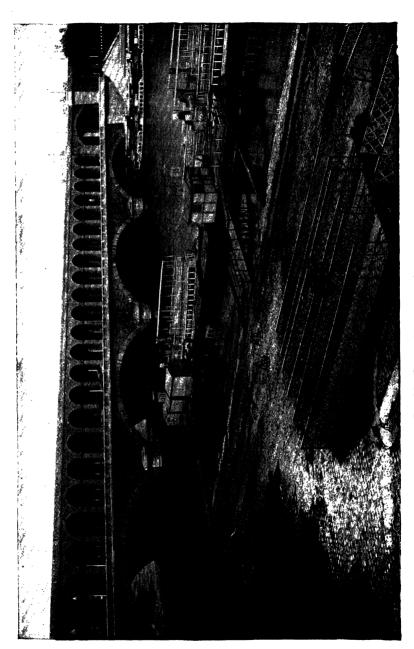




FIG. 38. STADTBAHN ALEXANDERPLATZ STATION.

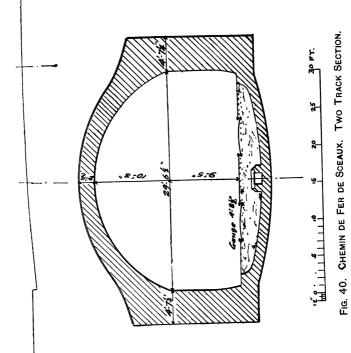


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openings in the roof, and two refuge niches for the trackmen below. The Luxembourg station being entirely underground it is necessary to adopt more effective methods than simply blowholes to ventilate it and the approaching tunnels. To accomplish this there is established at this station a ventilating fan and an upcast chimney. On the haunch of the tunnel arch there has been built an air passage, varving in section from 213 square feet to 86 square feet, for a distance of about 800 feet from the station. This passage is connected at intervals with the tunnel through openings in the roof. On the other side there are fresh-air inlets, which come in at the rail or platform level and are connected at the street surface with kiosks, which, in this case, act with a down draught. The fresh-air inlets and ventilator openings are never set opposite each other, but are "staggered." The action of the fan is, therefore, to remove the foul air from the top of the tunnel, the place of which is supplied by fresh air entering at the bottom. Figure 46 shows both the ventilating conduit and the air inlet.

Beyond the Luxembourg station the tracks are continued to form tail tracks for the switching of trains, and at the extreme end is a turn-table. This dead end will be ventilated by the fan and another air conduit similar to the one described.

The tunnel finishes abruptly, but is left in such shape that it can be extended at any time to form a larger and more important line, or constitute a part of a more comprehensive and complete system of rapid transit.

The station platforms and the cars will be lighted by electricity, while the same current will be used to supply power to operate the elevators, ventilating fan and turntable.

The city of Paris gives no subsidy to the railway, but on the contrary imposed many rigorous conditions on its construction,

adding both to the cost and the time required for its completion. The city demanded that the whole system of pipes and sewers wherever interfered with should be rearranged before commencing work on the tunnel, and while prosecuting the work that only one opening in the street was to be permitted at one time. Many trees along the Boulevard were removed during construction. The city set out new ones of large size at a cost to the company of 400 francs each.

The specifications were very voluminous and rigid as to the prosecution of the work, fines being imposed on the contractor for any infraction. The contractor, or an authorized representative, is required to be always in Paris, under a penalty of 20 francs per diem. He is to maintain an office, wit ha telephone located centrally on the work, which is to be kept open from 7 a. m. to 9 p. m., in charge of a properly accredited agent at all times, who is to keep a register in which orders can be written. A fine of 10 francs is imposed for every time the agent or register is absent during the above hours. An excellent clause in the specifications requires that the contractor is to transport the excavated earth in tight cars. For the use of one that leaks the contractor is to pay three francs for each day, and the cost of removing the dirt so spilled.

The French engineers stated that they had learned in the prosecution of this work two important facts which they had not anticipated:

First. To use masonry instead of iron.

Second. To avoid dimensions or special stones.

And they also gave it as their experience that it was better and cheaper to remove and introduce all material by train and not through the streets by wagon; to use simple material, especially concrete; to keep the rail level as close to the surface as possible, as the difficulties and expense increased with the depth. When completed this work, including the purchase of the Luxembourg station, but exclusive of any abuttal damages and equipment, will have cost 8,000,000 francs, or say \$1,600,000, an average of \$1,354,000 per mile. The construction has been entirely free from any accidents of any kind. The contract price for the important items, reduced to American measurements and money, are as follows:

Excavation, removed by carts with haul of three miles,		
per cubic yard	\$ 0	92
Excavation, piled at one side and used as back filling,		
per cubic yard		38
Excavation, removed by railway with haul of $3\frac{3}{4}$ miles,		
per cubic yard		54
Masonry, rubble in lime	4	12
Masonry, rubble in cement	5	05
Masonry, cut stone, soft	8	86
Masonry, cut stone, hard	11	45
Masonry, exposed voussoirs	19	85
Masonry, brickwork, not exposed, in lime	7	20
Masonry brickwork, exposed, in cement	8	5 6
Iron, wrought, in girders, per pound		03.7
Iron, cast, per pound		02.7

The material excavated was, for the most part, sand. The engineers say of the three classes of excavation the one that was most profitable to the contractors was the lowest-priced one, the removal of the core by train after the roof was completed.

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AMERICAN PRACTICE.

In this country the most important methods of urban rapid transit have so far been developed along the line of elevated railways. using the public streets as a right of way. The advantages and disadvantages of the various systems of elevated railways in New York, Brooklyn, Chicago and elsewhere are so well known as to require no description. There is nothing, however, anywhere in the line of elevated railways to be compared with the Berlin Stadt-Tunnels and underground construction have been used in many places by railways making an entrance into the various large cities. Most of these, like the Park avenue tunnel of the Harlem railroad, in New York, have no special means of ventilation other than such blow-holes as the topography and arrangement of the streets overhead permit. A few, like the Washington street tunnel in St. Louis, the approach to the Eads of St. Louis bridge, have mechanical ventilation by means of a fan. In the St. Louis bridge tunnel, however, which is about one mile long, and where there is a constant procession of engines burning soft coal, the atmosphere, in spite of the fan, is very bad.

But there are two American examples of rapid transit railroads which possess decidedly novel features, and they are included with this report, so that they may be compared with foreign structures. These are the Baltimore Belt Railroad, in Baltimore, and the late Intramural Railway at the Columbian Exposition in Chicago.

BALTIMORE.

The Baltimore Belt Railroad was built by the Baltimore and Ohio Railroad to pass its New York-Washington trains, both passenger and freight, through the city without the necessity of ferrying, as at present. The whole length of the line, which is double track, is about seven miles, but for a distance of 8,350 feet it lies in a tunnel beneath Howard street, one of the most important streets in Baltimore. This portion was all made by tunneling, except 1,200 feet by cut and cover, and 550 feet left open for a station. The depth of earth overhead varies from 10 feet to 50 feet. The section of the tunnel is shown in figure 48, the arch and walls being made of brick. The ground through which the tunnel was driven was a water-bearing sand, in places a quicksand, and a treacherous clay. During the tunneling operations the ground overhead was sustained by timber supports. But during the progress of the work it was found that the surface of the street settled more or less, and when the tunnel was about half completed there was a large inrush of water, causing a serious movement of the ground, which damaged some houses to such an extent that they had to be taken down. An inspection then made of the finished portion of the work, which had been built without an invert, developed the fact that the side pressure had moved the feet of the side walls inwards. Arrangements were at once made to have an invert, as indicated in the figure, built the whole length, and in the further prosecution of the work greater care and more efficient methods were introduced, and no further trouble resulted.

Construction was carried on by means of five shafts, the greatest distance between any two being 1,600 feet. Some of the shafts were located in the street and some on private property. In either case the hoisting and other machinery were on the latter, usually on the ground floor of some building altered for the purpose. The arrangement is shown in section in figure 49.

The work was commenced during the autumn of 1890, and will be completed and ready for traffic during the early part of next year. At the suggestion of a member of the previous rapid transit commission I inspected the work during construction in 1892, and last spring I had occasion to examine the Howard street tunnel when it was practically completed.

The important feature of this work is the proposed electrical haulage. The General Electric Company is now finishing some electric motors weighing 95 tons each, which will push the freight trains and haul the passenger trains, engine and all, through the tunnel up an 0.8 per cent. gradient. These motors are designed to attain a speed of fifty miles per hour, and do everything that a steam locomotive can do. They are equipped with an electrical air pump, bell, whistle, Janney coupler, etc.

The weight is carried on eight driving wheels 62 inches in diameter. The motors with the cabs have not yet been assembled, so that a photograph can not be taken, but figure 50 represents a 40-ton motor which the 95-ton motor will resemble in appearance. The trucks and mechanical parts are completed, however, and one of the former is shown in figure 51, from which the massiveness and size of the several parts can be seen. The completed motor will have two of these trucks. The motors are of the gearless type and are wound for a current of 2,700 amperes under a pressure of 700 volts. These machines are far beyond anything before attempted in the electrical line, and will put it, as far as power is concerned, on the same footing with steam.

It is interesting to compare figure 51 with figure 52. This latter is a view of an electric freight engine, constructed by the Thomson-Houston Company at Lynn, in 1891, and as tested in December of that year by me under instruction from the rapid transit commission at the invitation of the makers. This machine also marked a long step in advance, as it was the heaviest electrical locomotive

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built up to that time. In fact, it can be said that it was the first successful electrical locomotive built in this country. It is now in service. Its weight is $21\frac{1}{2}$ tons, and it has one single reduction 100 horse-power motor, with driving wheels 42 inches in diameter, but was designed for a low speed. The progress in three years, as shown by these two photographs, is very striking.

CHICAGO.

Mention of the Intramural Railway is introduced on account of its successful operation by electricity, and in order that the results obtained may be compared with the foreign statistics. It was the first, and up to date, the only electrically worked railway in the United States where full trains were run in a regular service. The elevated structure was a temporary one only, and therefore a description is omitted. Its character can be seen from the accompanying illustration. It was made up of 2,800 feet of double track and 1,900 feet of single track, the latter being around the end loops. Including the terminals there were 11 stations. A gradient of 1.5 per cent. was used several times, and at one point a short stretch of 2 per cent. The curves were sharp, a radius of 100 feet being permitted.

There were in the power house a battery of 10 water-tube boilers of the nominal capacity of 5,000 horse-power, using oil as fuel, and five compound condensing engines of 400 horse-power, three of 750 horse-power each, and one of 2,400 horse-power, each coupled direct to a separate dynamo. The maximum output was 3,000 amperes with a voltage of 500. The current was supplied to the trains through ordinary rails laid just outside of the main rails and between the tracks.

The trains were made up of four cars, of which the leading one was a motor car, and controlled by a driver on the front platform.

The four cars were each 46 feet long, with a seating capacity for 70 people. The motor car was equipped with four 133 horse-power motors, wound for a speed of 30 miles per hour. The motor car complete weighed 44,600 pounds and each of the trailers 27,000 pounds giving a total train weight, exclusive of passengers, of 63 tons. Figure 53 is a view of one of the trains complete. The speed of the trains, including stops, averaged 10 miles per hour and the trains were run at four minutes headway. The Westinghouse air-brake was used, pressure being maintained by an electric pump.

The road was in operation but five months, on account of which and on account also of the temporary construction of the system, it was not possible to develop or even to introduce economical methods of working. The figures, therefore, relating to the cost of operation of the road are comparatively worthless. Even as to the fuel burned, with the exception of one month, there was no approximation even as to what results could be obtained under a steady service, and after the matter was understood by the men. However, the fuel account for the five months was as follows:

This oil cost the company 72½ cents per barrel of 42 gallons, and 136 gallons gave the same steam production as one ton of Indiana coal. From these last figures, the second line in the above table has been computed.

During the month of August "some effort was made toward fuel economy" (extract from a letter from the general manager). Previous to that the plant had been put in working order, and in the last two months tests of the engines were made and the ma-

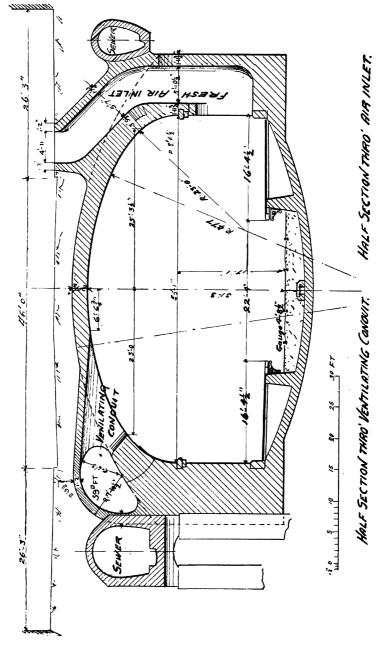


FIG. 41. CHEMIN DE FER DE SCEAUX. FOUR TRACK SECTION.

FIG. 42. CHEMIN DE FER DE SCEAUX. DENFERT STATION.





FIG. 43. CHEMIN DE FER DE SCEAUX, PORT ROYAL STATION. SOUTH END.



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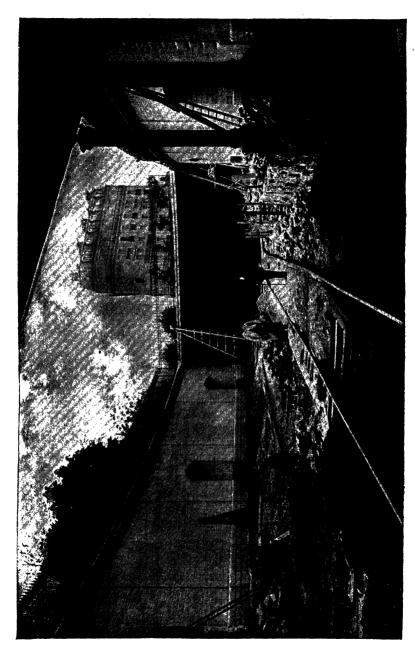


FIG. 44. CHEMIN DE FER DE SCEAUX, PORT ROYAL STATION. NORTH END.

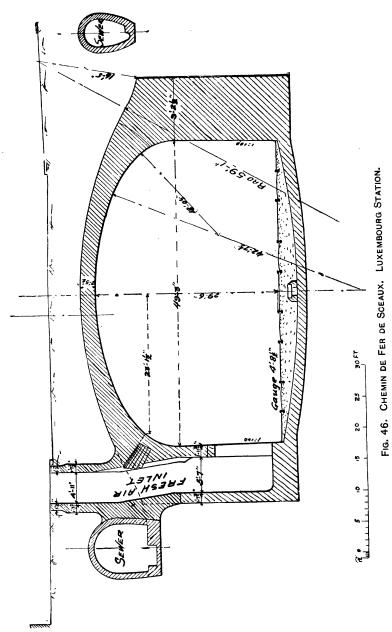




Fig. 45. CHEMIN DE FER DE SCEAUX. INTERIOR OF TUNNEL.









chinery run for the amusement of the people, and no special account of the fuel so used was kept, it being all charged to operation. But even under the adverse conditions of a new plant and unpracticed men, with temporary construction where losses were considerable, the August results were very favorable, as will appear later in comparison with other figures.

The results as to economy were sufficiently favorable to lead the management of the Metropolitan West Side Railway of Chicago to adopt electricity as a motive power. The line is double track, 16 miles in length, and will be open for traffic in January next; it is proposed to run four ordinary elevated railway cars to a train, the leading one of the four being a motor car, under the usual conditions of service as to speed and stations that are met with on other elevated railways. A power plant has been put in consisting of two 2,000 horse-power dynamos and one of 1,000 horse-power. Arrangements have been made, however, to permit the increase of power up to 18,000 horse-power, as required. The directors expect to effect by the electrical working a considerable saving in operating expenses.

COMPARISON OF RESULTS.

According to the instructions contained in the resolution of the board, this report is confined to the description of urban railways only, and is submitted without comment and without criticism. Some of the leading features and principle results of operation, however, are gathered below for the sake of comparison and to facilitate drawing conclusions.

It must always be borne in mind, that a given method of construction or some special method of operation which may be highly successful under certain conditions will not necessarily prove

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equally successful in some other locality under different conditions. and vice versa. A comparison of the different railways described will show that there are many different types, designed after mature consideration to meet some special requirements. The best results for a new project will be obtained by carefully studying without bias or previously formed judgment the experience of others, failures as well as successes, and selecting and combining those features with the improvements that good judgment will suggest. As the conditions vary greatly along a line of some length, which will traverse all kinds of districts, the commercial, the residential, and the still sparsely settled, so possibly it will be found that the type of road will vary. This investigation has been very fruitful in the gaining of many valuable suggestions, which cannot all be set forth in any report, and which even the plans themselves of the several railways do not show, but which were communicated personally by the various constructors as results of their personal experience and as suggesting changes in the structures should the same construction under the same conditions be repeated.

As far as could be done the cost of construction has been given in detail as much as possible. In some cases all that could be obtained was the total figure; in others this has been subdivided into construction cost, and money invested in realty or right of way; while in some instances the actual cost of the important items has been set out in detail. Naturally the several companies are somewhat loath to give such figures, and, therefore, the courtesy of the Glasgow and the Paris engineers in giving access to their contract papers and figures is to be especially acknowledged. An examination of these itemized figures will show that in many cases similar work can be done here for the same or nearly the same cost, while in the case of iron, either as plate girders or cast-

ings, that present American prices are very decidedly lower. The great difference in the cost of excavating material by tunneling or by open excavation is brought out very forcibly in the Glasgow work, where there is a variation of eight-fold. Prices made to me for similar work here do not vary very much from the above. In Paris it is well to notice the great reduction in cost if carting through the streets can be avoided, although the very much lower rate for railway transportation was the most profitable to the contractor.

The relative value of end and side doors, as a means of quickly receiving or distributing passengers, has been a much mooted question. The actual steps with side doors were shown to average 30 seconds in Berlin, while on the Metropolitan the average was 38 to 55 seconds. On the other hand the stops on the Liverpool overhead, with only two side doors to the car, are 20 seconds each, and on the City and South London with the end doors they are only 14 seconds, while on the elevated railways in New York they vary during the day from 4 to 14 seconds, and even during the very crowded hours from 15 to 30 seconds.

Omitting the New York experience, which may be due in part to the quicker working of the train guards, and possibly to the more nervous and active temperament of the people, it will be seen that under similar circumstances abroad the end doors give quicker results than side doors. This is due largely to the confusion resulting from the use of compartments, classes and many doors. Passengers run along the platform looking for good seats, while with the end-door arrangement they enter the car at once and distribute afterwards. On examining the rates of fare charged on all of the railroads described, it will be seen that the lowest fare is invariably lower than the standard American rate of 5 cents. It

is undoubtedly the fact that for the same service railways can be operated abroad for less money than in the United States on account of the lower wages paid. It is evident, therefore, that this advantage in wages has inured to the benefit of the public in lower fares, and not to the company in increased earnings. On the great London roads the fares are kept down by the excessive competition of omnibusses, which run on better located routes at rates varying according to distance from 1 penny upwards. was shown that the average third-class fare on the Metropolitan District, which constitutes two-thirds of its business, was but slightly over 31 cents, and the average receipts per passenger in all class on the Metropolitan less than 33 cents. One direct result of these low fares is shown in the smoky atmosphere and dingy lighting. The companies can not afford to make the outlay necessary to furnish their patrons with electrical traction and other modern conveniences. It is evident, therefore, that fares can be reduced to a point where there is little profit to the company and little comfort to the traveler. The public pays a small charge but gets results in comparison.

The earnings of the two principle underground companies given on page 12, which, in the case of the Metropolitan District, are not satisfactory, and in the case of the Metropolitan only partly so, must be considered in the light of their faulty location, low fares charged, etc., and not as necessarily condemning the whole principle of underground railways. This latter assumption, which is frequently made, is quite as unfair as it would be to condemn proposed viaduct railways because the Berlin Stadtbahn does not earn fair interest on the investment, or to argue that the earnings of the elevated railways in New York (if they had not been built) could not exceed \$60,000 per mile, the receipts of

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similar roads in Brooklyn, whereas they are actually over \$300,000 per mile. As was said in regard to systems and methods of construction, each project must be studied in relation to its own peculiar conditions, and therefore no foreign experience can be applied directly and wholly unless it is a certain fact that all the circumstances and conditions are the same.

In considering the question of an underground railway the most important item is that of ventilation. On the roads described this matter is handled in a variety of ways. The only lines burning coal that make a scientific attempt to solve the problem are the Mersey Tunnel and the Chemin de Fer de Sceaux, but the results obtained are only partly successful. ciple of mechanical ventilation is based on an average removal of the fouling; that is to say, the volume of foul gases produced by locomotives per minute is computed, which, under the most favorable circumstances, it is proposed to remove entirely before the arrival of the following train. By this arrangement the best condition of the atmosphere is just in advance of a locomotive, where there are no passengers, and the worst just behind the locomotive where the passengers are. None of the systems in use can save the travelers from the vitiation of the atmosphere by their own locomotive. It is not, however, generally understood how great is the consumption of air by a locomotive, compared with which the other causes of foul air are small. One of the New York Elevated Railway engines burns about ten pounds of coal per minute, which forms approximately 250 cubic feet of carbonic acid gas, or 15,000 cubic feet per hour. In the same time a person produces 0.6 cubic feet. The deoxygenation of the atmosphere by one of these small engines is equivalent to that of 25,000 people. In the ordinary railway tunnel, such, for instance, as the Harlem Railroad tunnel in Park avenue, the heavier locomotives burn about thirty-five pounds of coal per minute, and therefore each engine destroys as much air as would 87,000 people. These figures do not include the production of sulphur fumes, or the increase of humidity by the escape of steam, which also very seriously increase the discomfort. The consumption of air by the passengers, allowing 300 to a train, is, therefore, but slightly more than 3-1,000 of 1 per cent. of that by a locomotive. The substitution of a motor other than an ordinary steam locomotive would at once remove 99.997 per cent. of the foul atmosphere from an ordinary railway tunnel.

As to the comparative economy of electricity, the results obtained in operating the electrically worked railroads have been set forth in detail as to the consumption of fuel, which is the governing factor in comparing this power with steam locomotives. The service on the Manhattan and Brooklyn Elevated Railroads, except that it is heavier, compares very closely as to speed, station distances and gradients with the lines described, so that their expense figures may be set up in order that the relative economy of electricity and steam can be analyzed. Through the courtesy of the officers of those companies I am able to do this.

But before presenting the results of electrical traction as compared with steam, permit me to state the few fundamental principles in regard to those powers. There is a widespread popular idea that electricity has some mysterious properties which render it vastly superior and more economical than steam as a motive power. Such an idea of course is fallacious in the extreme. Since electrical energy is developed by means of a steam engine, and as each transformation of power can be done only at a loss, or at the cost of coal, it is evident that all things being equal

electricity must be less economical than steam. But as regards the two forms of power as applied to locomotion, all things are not equal and therefore the relative economies vary according to the conditions. A locomotive is a very simple machine, and it is entirely self-contained, coal being burned under its own boiler, converting water into steam, which through the mechanism of the cylinder, piston rod and wheel propelsit. The only losses are in the boiler and internal friction of the moving parts of the machinery.

In the case of an electrical railroad, steam is made under stationary boilers by which main engines are run, whose losses correspond in kind to the losses above mentioned for the steam locomotive. The engines, however, drive dynamos, which produce electricity. This electricity has to be conducted from the powerhouse, some miles, perhaps, to the trains upon the railway, and when it reaches the trains, is, by means of motors, reconverted back into power, and turns the wheels of the electric locomotives. It is thus seen that while the steam locomotive has two sources of loss, boiler and engine mechanism, the electric locomotive has these two and three more, viz.: Dynamo, line and motor. Fortunately for the economical aspect of electricity, the boilers and machine parts of a locomotive are not and can not be brought up to the highest efficiency, and it is possible to save enough in the first two losses to compensate for the other three.

In ordinary locomotives steam is used with single expansion and then exhausted with much of its power not utilized, so that it requires the combustion of about five pounds of good coal per hour for each horse power. Lately, the principle of compounding, whereby steam is expanded twice, has been successfully applied to locomotives, so that the coal consumption has been reduced 20 to 30 per cent.

In a stationary plant much better results are obtained. In the first place, boilers can be built with combustion chambers in which coal can be more perfectly consumed, while the enginers are always made double and sometimes triple expansion and their efficiency further increased by the use of a condenser, so that all the possible energy is extracted from the steam, and the back pressure of the atmosphere of 15 pounds reduced to two or three pounds. Under these conditions a large central plant can be run on a consumption of from $1\frac{3}{4}$ to $2\frac{1}{2}$ pounds of coal per horse power per hour. In some of the marine engines on the large Atlantic liners the coal per horse power has been reduced as low as 11 pounds per hour. There is thus a saving at the engines of 50 per cent. of the coal. If the losses in the production of electricity, its transference, and transformation back into power amount to as much as 50 per cent. of the brake horse power of the engines, it is evident that the losses balance the gains, and that there is no saving in the weight of coal. The results quoted, in the case of the railways inspected, show, however, that a higher efficiency than 50 per cent. is attained in practice. But there is another economical advantage that a central power-house has over steam locomotives, irrespective of weight of coal, and that is in the cost of coal burned. On locomotives it is necessary to carry the best quality of coal to get as much heat-giving material in the tender as possible, and to diminish the disagreeable effects of smoke for the passengers, and it must also be of lump size, as very fine coal would be shaken through the grate bars. Coal of that quality commands an extra price. Under stationary boilers, however, the grate bars can be adapted to burn the cheap fine coal of an inferior quality.

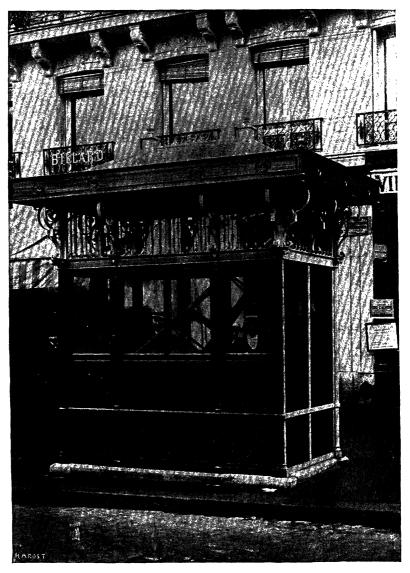
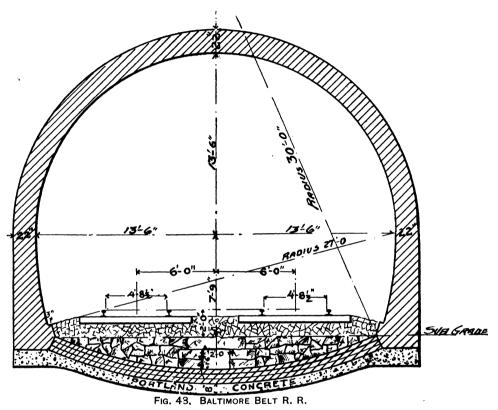
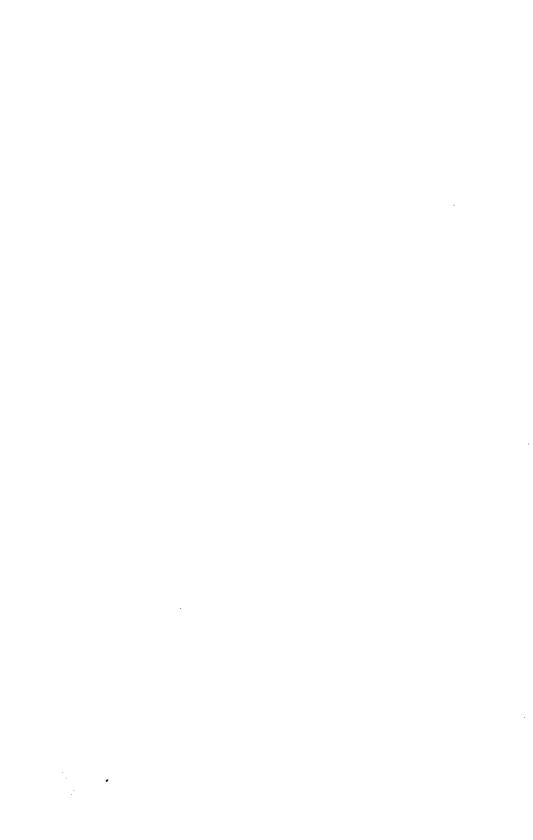


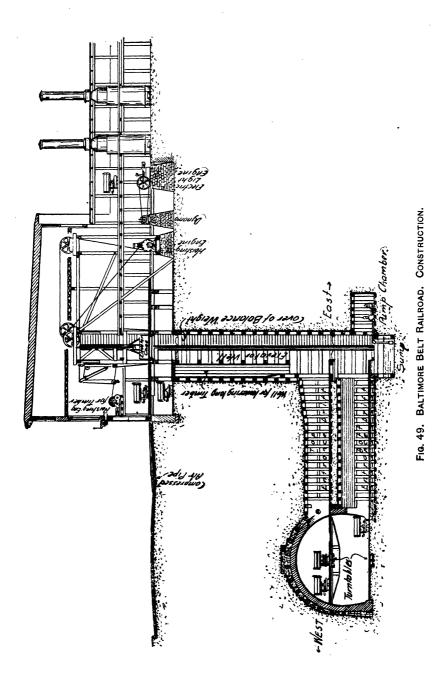
FIG. 47. VENTILATING KIOSK.











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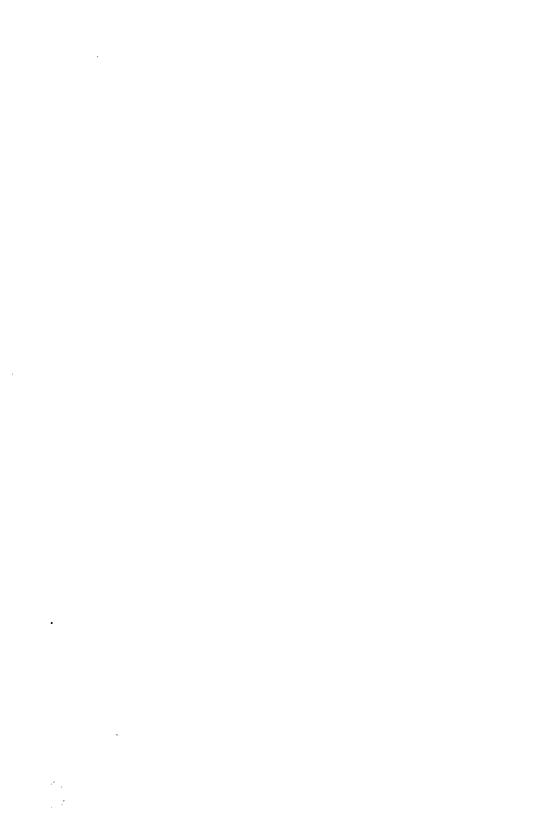
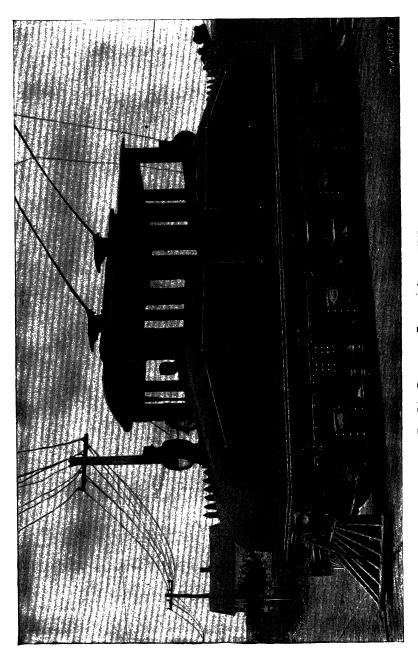


FIG. 50. BALTIMORE BELT R. R. ELECTRIC LOCOMOTIVE TRUCK,











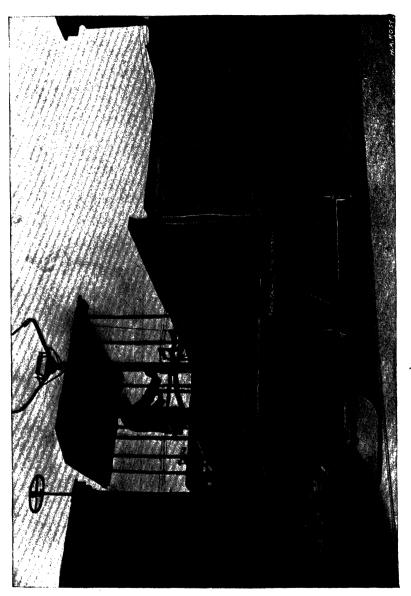
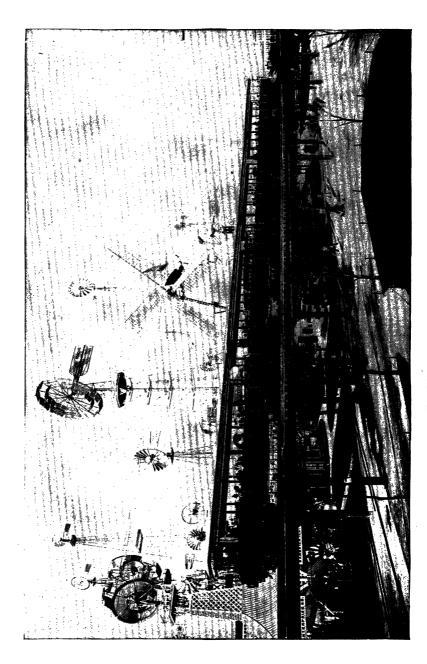


FIG. 52. FREIGHT ELECTRIC LOCOMOTIVE.



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The operations of railways are generally compared as to cost in dollars and cents, but such a comparison is manifestly unfair, as the cost of supplies and wages varies between wide limits according to locality. Through the courtesies of the officers of the several roads, statistics in regard to the actual coal consumption have been attained, which is the only item that need be considered in comparing the running expense of steam or electricity. On an electric locomotive but one man is really needed, the driver, but on a railway, with trains running at short headway, it probably would not be considered safe to operate trains with but one man on the engine, so that a second man would be carried who could control the machine in the event of a sudden accident to his chief. The wages of the men on the road, unless the extra men on account of lighter work was paid less than a fireman, would therefore be the same. The number of men required at the central power station would be small as compared with those on the trains, and their wages would be offset by the labor saved in tending the coal and water stations on the steam road.

To compare the consumption of coal, the figures obtained are gathered together in the following table, which shows the weight of train, coal consumed per train mile, and coal consumed per ton mile, the estimated average weight of passengers being included:

Railway.	Weight of train mile; tons.	Coal per train mile; pounds.	Coal per ton mile; pounds.
Liverpool Overhead	42.0	17.5	.416
Intramural	74.0	36.6	.495
City and South London	44.0	28.0	.604
Manhattan (1)	80.8	49.2	.609
Brooklyn E. R. (2)	63.5	42.0	.661
Manhattan (3)	91.1	51.3	.528
Brooklyn E. R. (4)	91.5	48.1	.526
			

(1) Ninth Avenue, train averaging	3.77
(2) Short train, averaging	2.74
(3) All trains, averaging	4.50
(4) All trains, averaging	4.55

The normal train both in New York and Brooklyn is much heavier than those on the electric railways, so that the quantities of fuel consumed on the lightest trains on the two former roads have been obtained and are the proper figures to compare with the first three, because the consumption of coal does not increase in direct proportion to the weight of train. This explains the better showing per ton mile made by the Manhattan 80.8 ton train over the Brooklyn 63.5 ton train. An examination of these figures shows a very striking economy in favor of electricity. On behalf of the elevated figures it might be urged that new engines of recent designs would show more economical results, probably 20 per cent., but, on the other hand, if the three electric road had as heavy and as steady a traffic as the two large elevated roads, their cost per ton mile would also be reduced; and it must be remembered besides that those three are on a basis of poor, cheap coal, as compared with high-priced anthracite. The balance of economy is in favor of electricity, not only in weight used, but in cost per ton paid for the coal. As comparing the electrical results between themselves, the better showing made by the Liverpool road with the Intramural shows the effects of permanent and temporary plants, while the poorer showing by the City and South London is due to the use of non-economical and non-condensing engines, which it was estimated increased the consumption of coal 20 per cent. to 25 per cent. Every facility for a full and satisfactory inspection of the works and in many cases of the private accounts of the several railways was kindly granted by the respective companies, and I take special pleasure in acknowledging my indebtedness to the courtesies offered and the assistance rendered by:

Sir Douglas Fox, consulting engineer, Liverpool Overhead, Mersey Tunnel, etc.

John Bell, chairman, Metropolitan Railway.

Alfred Powell, general manager, Metropolitan District.

J. H. Greathead, engineer, City and South London Railway.

Basil Mott, resident engineer, City and South London Railway.

F. W. Webb, chief engineer, L. & N. W. Railway.

Maurice Fitzmaurice, resident engineer, Blackwall Tunnel.

Charles Forman, engineer, Glasgow Central Railway.

Messrs. Simpson & Wilson, engineer, Glasgow District, Subway and Harbor Works.

- C. A. Rowlandson, general manager, Mersey Tunnel.
- S. B. Cottrell, general manager, Liverpool Overhead Railway.
- M. A. Briere, chief engineer, C. d. f. d'Orleans.
- M. Eugene Verdeaux, inspector of line, C. d. f. d'Orleans.
- Col. F. K. Hain, vice-president, Manhattan Railway Company.
- O. F. Nichols, chief engineer, Brooklyn Elevated Railway.
- W. T. Manning, chief engineer, Baltimore and Ohio Railway.
- W. E. Baker, general manager, Intramural and Metropolitan West Side Elevated Railways.
 - John B. Blood, assistant engineer, General Electric Company.

 Respectfully yours,

WM. BARCLAY, PARSONS,

Chief Engineer.

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ADDENDUM.

The Stadtbahn.

The following information was obtained from the Minister of Public Works, through the courtesy of the United States Embassy at Berlin, but was received after the report had gone to press.

The government reports in regard to the operation of the Stadtbahn are published every five years. The last, bearing date 1893, gives the returns for the year 1892. In that year the construction account in detail stood as follows:

Maintenance of structure during construction. 71,688 Viaduct. 4,427,327 Superstructure. 449,906 Signals. 67,054 Stations. 1,873,267 Extraordinary expenses. 124,459 Rolling stock. 577,019 Administration. 507,371 Incidentals. 51,160 Interest. 91,407	Right of way	\$7 ,926,634
Viaduct. 4,427,327 Superstructure. 449,906 Signals. 67,054 Stations. 1,873,267 Extraordinary expenses. 124,459 Rolling stock. 577,019 Administration. 507,371 Incidentals. 51,160 Interest. 91,407	Earthwork	47,338
Superstructure. 449,906 Signals. 67,054 Stations. 1,873,267 Extraordinary expenses. 124,459 Rolling stock. 577,019 Administration. 507,371 Incidentals. 51,160 Interest. 91,407	Maintenance of structure during construction	71,688
Signals. 67,054 Stations. 1,873,267 Extraordinary expenses. 124,459 Rolling stock. 577,019 Administration. 507,371 Incidentals. 51,160 Interest. 91,407	Viaduct	4,427,327
Stations. 1,873,267 Extraordinary expenses. 124,459 Rolling stock. 577,019 Administration. 507,371 Incidentals. 51,160 Interest. 91,407	Superstructure	449,906
Extraordinary expenses. 124,459 Rolling stock. 577,019 Administration. 507,371 Incidentals. 51,160 Interest. 91,407	Signals.	67,054
Rolling stock. 577,019 Administration. 507,371 Incidentals. 51,160 Interest. 91,407	Stations.	1,873,267
Administration. 507,371 Incidentals. 51,160 Interest. 91,407	Extraordinary expenses	124,459
Incidentals. 51,160 Interest. 91,407	Rolling stock	577,019
Interest	Administration	507,371
-	Incidentals	51,1 60
Total	Interest.	91,407
	Total	\$16,214,630

Passenger trains, as ordinarily made up, consist of two second class and three third class cars. The former have four compartments and 40 seats, and the latter five compartments and 50 seats. The total length of each car is 31 feet 10 inches, and width, 8 feet 7 inches. The second class cars weigh 26,400 pounds and the third class 25,600 pounds.

The Stadtbahr, since 1887, has done some freight business. Berlin's principal market, the "Zentral Markthalle," is located near the Alexanderplatz station, and to it two market trains run daily. During 1892, 49,963 German tons were handled, from which the receipts were \$188,552.

The arches beneath the viaduct are rented as far as possible. During the year 1892 there were 477 to rent, of which 339 or 72 per cent. were taken. The arches or rooms beneath the station buildings were also rented. The best type of the former is shown in figure 37, while some of the latter can be seen in figure 38. The revenue from these sources amounted to \$115,388. however, did not include receipts from station privileges proper, which added \$6,788. The number of arches rented is increasing each year, but their value is largely affected according to their location on or near streets and by their adaptability to the character of the business in their neighborhood. The arches under the viaduct are used as storage yards for iron, stone, and building materials, stables, restaurants, markets, warehouses, blacksmith shops, offices, etc., while the station rooms are rented for express companies' offices, fruit and tobacco shops, restaurants, local postoffices, money exchanges, markets, etc. The number of passengers carried in 1892 was 32,546,240, of which 11.4 per cent. were second class and 88.6 per cent. third class. The receipts amounted to:

From operations of railway	\$ 1,105,351
From rentals and miscellaneous sources	140,089
Total	\$1,245,440

The details of the operating expenses are not published, but they amount to about 85 per cent. of the gross receipts, so that the net receipts make but a small return on the capital invested. A comparison of the business done in 1892 with that in 1887 shows that the number of passengers carried has increased 110.6 per cent. and the receipts 54.1 per cent. During the intervening period a considerable reduction in fares had been made, which accounts for the disproportionate increase.

REPORT

OF

RAILROAD COMMISSIONERS,

STATE OF NEW YORK.

IN THE MATTER OF

Examination of the Books and Accounts of the Brooklyn Heights Railroad Company and the Brooklyn City Railroad Company, Including a Report of the Physical Condition of the Brooklyn City Railroad System.

December 10, 1894.

Compliments of the Long Island Traction Company.



REPORT.

BOARD OF RAILROAD COMMISSIONERS OF THE STATE OF NEW YORK.

Albany, December 10, 1894.

Present.—Commissioners Samuel A. Beardsley, Michael Rickard; Alfred C. Chapin.

Report in the matter of the examination of the books and accounts of the Brooklyn Heights and Brooklyn City Street Surface Railroad companies of the City of Brooklyn.

ALBANY, December 10, 1894.

To the Honorable the Board of Railroad Commissioners of the State of New York:

Gentlemen:—Pursuant to a resolution passed on November 12th by your honorable board, I have examined the books and accounts of the Brooklyn Heights and the Brooklyn City Railroad Companies. This examination was ordered upon the receipt by the Board of certain charges against these companies, by Mr. H. M. Thompson, a stockholder of the Long Island Traction Company. The two railroad companies joined in requesting the Board to order such an examination. The examination was begun on November 19th and concluded on November 28th.

HISTORY OF ORGANIZATION.

The Brooklyn City Railroad Company.—This corporation was organized under the laws of this State upon December 17, 1853. Prior to 1892 its original capital of \$2,000,000 had been increased as its business expanded and as it absorbed other lines, to \$6,000,000. In 1892 your board granted permission to the company to [Assembly, No. 98.]

increase its capital to \$12,000,000 for the purpose of changing the system from horse power to electricity. This work of conversion is still in progress. In addition to its capitalization of \$12,000,000 the Brooklyn City Company has issued bonds to the amount of \$6,000,000, and has assumed a funded indebtedness of acquired lines to the amount of \$925,000, making its total obligation, including capital stock, \$18,926,000.

The Brooklyn Heights Railroad Company.—The Brooklyn Heights Railroad Company, chartered April 1, 1887, is a cable road having a total length of 1,166 miles, running on Montgue street, Brooklyn, from Court street to the Wall street ferry. Its capital stock is \$200,000, and its bonded indebtedness is \$250,000. All of the stock of this company, except a sufficient number of shares to qualify its directors, is owned by the Long Island Traction Company.

The Long Island Traction Company.—The Long Island Traction Company is a corporation organized under the laws of Virginia. The charter bears the date of March 10, 1893. Its incorporators were: Feliz Campbell, of Brooklyn, president and director; Crowell Hadden, of Brooklyn, vice-president and director; Henry A. Murray, of New York City, treasurer; John B. Summerfield, of Brooklyn, secretary and director; Silas B. Dutcher, of Brooklyn, director, and George W. Young, of Jersey City, director. purposes for which the company were formed are: "To conduct the business of purchasing, acquiring, holding, improving developing, leasing, exchanging and selling real and personal property, including machinery, patent rights, letters patent and other rights for the supplying of power or the use thereof to, upon or in work owned, leased or controlled by any railroad corporation or other corporation or individual, and to aid any corporation or individual in the construction, repair, improvement or extension of any such or other works by the advancing of money, the furnishing of credit or otherwise, and also to purchase, subscribe or otherwise acquire for any valid consideration, and to hold, use and dispose of stocks, bonds and other evidences of indebtedness of any corporation, domestic or foreign, with which it may have business

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relations, or may have power to contract, and to issue in exchange for said stocks, bonds and other evidences of indebtedness its own stocks, bonds or obligations."

According to the statement of the officers, the capital stock of this company, 300,000 shares, of \$100 each, par value, aggregating \$30,000,000, was issued for property consisting of stock and contracts, and for cash provided, out of which cash the \$4,000,000 guarantee fund under the Brooklyn City lease was furnished and deposited. The total amount of cash paid in was \$4,500,000, and in addition to the controlling ownership of the stock of the Brooklyn Heights Company also owns, all of the stock of the Brooklyn, Queens County and Suburban Railroad; the Long Island Traction Company, except such as is held by the directors to enable them to qualify.

Lease of the Brooklyn City property.—On February 14, 1893, the Brooklyn City Railroad Company executed a lease of all its properties, including franchises, rights of way, real estate and equipment to the Brooklyn Heights Railroad Company for 999 years, the consideration being the payment of the Brooklyn Heights Company of a 10 per cent. dividend on the capital stock of the Brooklyn City Railroad Company and all other fixed charges, included interest on its bonded indebtedness and organization expenses. By the terms of this lease the Brooklyn City Railroad Company was to expend in the conversion of its various systems from horses to electricity, all of its moneys from the sale of \$3,000,000 of capital stock and \$3,000,000 of bonds, authorized but unissued at the time of the lease, and was to reserve to itself whatever surplus moneys resulting from previous operation there remained on hand at the time the control of the property was assumed by the Brooklyn Heights Company, and whatever premiums were realized from the sale of its stock and bonds. All accrued obligations at the time of taking possession were to be paid by the Brooklyn City Company. The cost of such construction as remained uncompleted, and such extensions as are from time to time necessary or desirable, is to be paid for by the Brooklyn Heights Railroad Company and is to become a contingent charge against the Brooklyn City Company, to be adjusted at the termination of the lease, or at such time and in such manner as may be agreed upon by the lessee and lessor corporations. guarantee the faithful performance of the conditions of the lease, the lessee company agreed to deposit in various trusts companies and banks a guarantee fund of \$4,000,000, the income of which is to be paid to the lessee company. In case of default in the payment of any of the fixed charges of the lessor company, the lessee company is authorized to use \$250,000 of the guarantee fund, but no part of the guarantee fund can be impaired to an extent which shall reduce such fund below \$3,750,000. The lessee company took possession of the property of the Brooklyn City Company and began operation of the same on July 6, 1893, and has continued to operate said system. On June 30, 1894, the Brooklyn City Railroad Company reported a total construction and equipment of \$18,839,934.13. Since that date all of the funds of the Brooklyn City Railroad Company, except its surplus, have been expended in construction expenses, and the completion of the conversion, together with extensions and the construction of new roads, is now carried on by the Brooklyn Heights Company, under agreements and conditions provided for in the lease.

The total length of all tracks and sidings owned by the Brooklyn City Company and operated by the Brooklyn Heights Company, at the date of the last report, June 30, 1894, was 199.02 miles.

It is proper to state that every facility for a full examination of the books and accounts of the Brooklyn City and Brooklyn Heights corporations, was afforded your examiners by the officials of the respective roads. The accounts of the Brooklyn City Company were examined back to September 30, 1889, the date of a last examination by a representative of your board. In the case of the Brooklyn Heights Company, it having been operating the lines of the Brooklyn City system only a year, a verification of its last annual report and of its quarterly statement, rendered September 30, 1894, was deemed sufficient.

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The method of accounts and bookkeeping of the Brooklyn Heights Company are admirably adapted to its purpose as lessee of the Brooklyn City system. The statements of its receipts are in such form and are so protected by checking devices and detailed reports, as to set forth the total income of the company for each day in a complete and correct manner, and also so as to place before the president on the succeeding morning an exhibit of the gross earnings upon each line operated, together with the number of cars in operation, the number of trips, the mileage of cars, the wages of employes and the net earnings after deducting wages. The expenditures of the corporation are controlled by requisitions, orders, audits and certifications by the various officers and employes through whose hands these accounts pass. the auditing system in use, each entry upon the books of the corporation is certified to, first, by the auditing committee of the board of directors, then by the president, secretary and treasurer, and by each employe through whose hands the voucher passes. This elaborate and comprehensive system of accounting was devised by W. A. H. Bogardus, the secretary and treasurer of the company, and is so complete as to deserve notice and commendation.

The Brooklyn City books are the same as those used at the time of the organization of the road in 1853, the same ledger being still in service. No fault can be found with their accuracy, but more elaborate methods should have been adopted when the change of motive power was changed from horses to electricity in order that there could have been a more intelligent division of the items of expense. The present secretary of the company, Mr. Swin, appreciates the necessity for a change in system to more nearly conform to the system of the lessee road, and a new set of books will be opened forthwith.

FINANCIAL CONDITION.

The following statements, tables and comparisons fully explain the financial condition of the companies under examination, the annual report of the Brooklyn Heights Company being analyzed first, as it is the operating company. The criticisms of Mr. Thompson may be briefly summarized as follows:

Brooklyn Heights: Rentals paid, \$1,434,941.50, no details to show what is included; differences in other fixed charges deducted from income; renewals of horses, \$11,160; trucking credit, \$139,311.39; repairs of road-bed, \$141,570.53; "no repairs of consequence would be required on a well constructed electric road for five years."

Brooklyn City: Interest charged to construction, \$152,345.78; "not a proper charge, should be against income;" this amount also includes \$90,000, dividend on stock, charged to construction, which Mr. Thompson inquires about; reconstructing road bed, general criticism on charges to construction; rentals, fixed charges and dividends "do not correspond with payments by Brooklyn Heights Company;" general criticism of construction account of company.

BROOKLYN HEIGHTS RAILROAD COMPANY.

Annual Report for the Year Ending June 30, 1894.

Stock and Bonds.	
Capital stock	\$200,000 00
Bonds at 5 per cent. per anum	250,000 00
Cost of Road and Equipment.	
Cost of road	\$447 ,685 71
Cost of equipment:	
Cost of cars and fixtures \$5,775 60	
Horses	
	58,894 41
	\$506,580 12

Among the various items of property received by the Brooklyn Heights Company, were the horses which had been used in the operation of the Brooklyn City Company. Concerning these horses the two companies made a special arrangement, fixing upon them a price of \$185,920, with the condition that the Brooklyn Heights Company should make payments on this account as fast

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as it sold the horses, or in proper proportion as the horses died. Such payments were to be credited by the Brooklyn City Company to its equipment account. The books show that these credits have been propertly paid, and the item of \$53,118.81 is the inventoried value of the horses now in the possession of the Brooklyn Heights Company. The Brooklyn City Company has received \$151,896, leaving \$34,024 still due it upon this account.

Income.

The income statements of the two roads must be considered together in order to arrive at an intelligent understanding of the transactions involved. The year ending June 30, 1894, was the first under the operation of the lease. The Brooklyn Heights Company had been in possession of the property during the part of the month of June, 1893, but there was no adjustment or settlement of accounts between the two roads until the construction fund of the Brooklyn City Company was exhausted. During the greater part of the year therefore, the Brooklyn City was expending money on account of its own construction, and the Brooklyn Heights was also expending money on account of Brooklyn City construction, for which it was from time to time reimbursed. Brooklyn Heights Company opened a set of books differing in many respects, as to the division of charges, from those of the Brooklyn City Company, going more into detail, in order to meet the requirements of the new business, in which respect the Brooklyn City books were inadequate. At the outset it was assumed that all charges for taxes and interest should be paid directly by the Brooklyn Heights Company, and this method prevailed for a time. Then it was decided that as the Brooklyn Company was the owner of the property, it should have the original receipts for all payments, and thereafter the rental for these purposes was paid to and distributed by the Brooklyn City Company. The result of this complication and the fact that charges and counter claims were sometimes adjusted by charges and credits without the actual transfer of money, caused much confusion, and the further fact that the Brooklyn City Company was not always prompt in adjusting the accounts so far as the entries on its books were concerned, some of which were still unadjusted at the time of this examination, led to discrepancies in the rental statement. net difference in dispute, however, \$281.03, is so small, as to be unworthy of attention, and the accounts would probably have balanced had the blank issued by this board, upon which the report was made, been more comprehensive in its requirements, and the necessity for prompt adjustment thus been called to the attention of the officers of the two companies. Unless the form of the blank is changed, there will be apparent discrepancies each year, between these two companies, and between all other companies similarly related to each other, for the reason that the lessor road can only report its actual cash transactions in its rental account, while the lessee road will report in total, not only the amounts it paid in rental (including all charges), but the amounts due and accrued, and the interest and tax charges upon its own property. In the future, however, the Brooklyn Heights company, in compliance with the suggestions of your examiner, will report annually in detail the total amount paid to the Brooklyn City Company, and on what account; the charges due and accrued deducted from income, and on what account, and also will separate such payments from the payments and charges upon its own property. The Brooklyn City Company will report its rental in detail and its disbursements as now required by the blank, and its report should in future balance with the amount in the Brooklyn Heights account reported to have been paid. A thorough examination of the books and vouchers of the Brooklyn Heights Company relative to its income account, warrants the statement that the income account of that company is correct showing of its payments to and on account of the Brooklyn City Company. A new set of books, which will be more in harmony with those of the lessee company, will be opened by the Brooklyn City Company as soon as final adjustment is made of the minor disputed items.

The following are the statements in detail with analysis and explanation of the income accounts of the two companies for the year ending June 30, 1894:

BROOKLYN HEIGHTS RAILROAD.

Income Account.

Gross earnings from operation	\$4,303,117 2,673,391	
Net earnings from operation	\$1,629,725	72
Income from other sources as follows, viz.:		
Interest on guarantee fund and miscellaneous interest and rentals	\$ 189,339	49
Gross income from all sources	\$1,819,065	21
Deductions from incomes as follows, viz.: Taxes on property used in operation of the roa	ad:	
On account Brooklyn Heights	\$2,314	63
Paid Brooklyn City rental	130,249	74
Paid direct on account rental	17,597	77
Due Brooklyn City, rental	4,091	18
Accrued, not due	82,586	41
	\$ 236,839	73
Taxes on earnings and capital stock:		
On account Brooklyn Heights	\$21,420	20
Paid Brooklyn City, rental	8,356	82
Accrued, not due	19,500	00
	\$49,277	02
Taxes other than above:		
Paid Brooklyn City, rental	\$2,985	23
Paid direct on account rental	1,566	28
Accrued, not due	17,958	90
- -	\$22,510	41
of the control of the		

ASSEMBLY	1706
	Interest on funded debt (all on account Brooklyn
\$12,500 00	Heights), due and accrued
8,444 13	On floating debt
\$20,944 13	- - -
	Rentals:
\$833,262 01	Paid Brooklyn City, dividends
120,999 62	Paid Brooklyn City, interest
81 24	Interest on mortgage, paid direct
18,997 66	Rents, paid direct
300,000 00	Due Brooklyn City, dividends
151,017 67	Due Brooklyn City, interest
10,583 30	Interest accrued, not due
\$1,434,941 50	
\$1,764,512 79	,
\$54,552 42	= / Net income from all sources
60,968 36	Surplus June 30, 1893
\$115,520 78	Total surplus June 30, 1894
	BROOKLYN CITY RAILROAD.
	$Income\ Account.$
\$2,149 01	Gross earnings from operation
22,374 64	Less operating expenses (excluding taxes)
\$20,225 63	Net deficit from operation

Income from rental, viz	_	
Dividends	\$833,262	01
Interest on funded debt	121,733	30
Taxes on real estate	132,603	72
Taxes on earnings and capital stock	8,356	82
Assessments	1,376	64
_	\$ 1,097,332	49
Gross income from all sources	\$1,077,106	86
Deductions from income as follows, viz.:		
Taxes on property used in operation of road:		
Proportion due from and paid by Brooklyn City		
Railroad	\$58,023	69
Amount paid by Brooklyn Heights to Brooklyn		
City Railroad	132,603	72
Amount due from Brooklyn Heights paid by		
Brooklyn City Railroad	3,626	85
	\$194,254	26
Taxes on earnings and capital stock:		
Poportion due from and paid by Brooklyn City		
Railroad	\$30,992	14
Amount paid by Brooklyn Heights to Brooklyn	400,002	
City Railroad	8,356	82
: 1	\$ 39,348	96
Taxes other than above:		
Paid comptroller of Railroad Commission due from and paid by Brooklyn City Railroad Interest on funded debt:	\$1, 349	41
Amount paid by Brooklyn Heights to Brooklyn City Railroad	121,733	30
Amount due from Brooklyn Heights paid by	J	
Brooklyn City Railroad	150,283	96 —
in the second of	\$272,017	26

Interest on floating debt:		
Due from and paid by Brooklyn City Railroad	\$8,916	90
<u> </u>	\$515,886	79
Net income from all sources	\$ 561,220	07
Payments from net incomes as follows, viz.:		
Dividends paid by Brooklyn Heights:		
Two and one-half per cent. on \$9,706,130	\$242,653	25
Two and one-half per cent. on \$11,624,350.40	290,608	
Two and one-half per cent. on \$12,000,000	300,000	00
	\$833,626	01
Due from Brooklyn Heights, advanced by Brooklyn City, two and one-half per cent. on \$12,000,000 Paid from surplus by Brooklyn City Railroad two per cent. on \$12,000,000	\$300,000 240,000	
	\$1,373,262	01
Deficit as reported for year ending June 30, 1894	\$812,041	94
Surplus June 20, 1893 \$719,913 77 Premium on stock 7,941 66 Premiums on bonds 212,916 00 Due from Brooklyn Heights on account of rental, payable July 1, 452,604 92 1894 452,604 92	\$ 1,394,376	35
Total surplus June 30, 1894	\$ 582,334	41
=		

Statement of deficit, June 30, 1894.

Due from Brooklyn Heights Railroad:	
For dividends	\$300,000 00
For taxes on property used in operation	3,626 85
For interest on funded debt	150,283 96
	\$453,910 81
Dividend paid from Brooklyn City surplus Brooklyn City Railroad proportion of taxes and	240,000 00
interest	99,282 14
Deficit in operation account	$20,\!225$ 63
	\$813,418 58
Less amount paid by Brooklyn Heights to Brook-	
City Railroad and credited to real estate	1,376 64
	\$812,041 94
Statement of Credit Claimed by the Brooklyn City Co	ompany on Ac-
Statement of Credit Claimed by the Brooklyn City Cocount of Rental Due From Brooklyn Height For dividends	
count of Rental Due From Brooklyn Heigh For dividends	
count of Rental Due From Brooklyn Height For dividends	tts.
count of Rental Due From Brooklyn Height For dividends	\$453,910 81
count of Rental Due From Brooklyn Height For dividends	\$453,910 81 \$305 89 \$453,604 92
count of Rental Due From Brooklyn Height For dividends	\$453,910 81 305 89 \$453,604 92 to Have Been Brooklyn Heights.
For dividends	\$453,910 81 \$305 89 \$453,604 92 to Have Been Brooklyn Heights. \$833,262 01
For dividends. \$300,000 00 For interest on funded debt. 150,283 96 For taxes on property used in operation. 3,626 85 Deduct amount in dispute subject to adjustment. Net amount due as claimed. Net amount due as claimed. Paid. For dividends. \$833,262 01 For interest. 121,733 30	\$453,910 81 \$305 89 \$453,604 92 \$to Have Been Brooklyn Heights. \$833,262 01 120,999 62
For dividends	\$453,910 81 \$305 89 \$453,604 92 to Have Been Brooklyn Heights. \$833,262 01 120,999 62 141,591 79
For dividends. \$300,000 00 For interest on funded debt. 150,283 96 For taxes on property used in operation. 3,626 85 Deduct amount in dispute subject to adjustment. Net amount due as claimed. Net amount due as claimed. Paid. For dividends. \$833,262 01 For interest. 121,733 30	\$453,910 81 \$305 89 \$453,604 92 \$to Have Been Brooklyn Heights. \$833,262 01 120,999 62
For dividends	\$453,910 81 \$305 89 \$453,604 92 to Have Been Brooklyn Heights. \$833,262 01 120,999 62 141,591 79

Add amount paid Brooklyn City and		Brooklyn Heights.
charged to maintenance		\$ 763 59
taxes	\$18 20	
	- , ,	\$1,096,617 01
Deduct amount charged against in-		
terest	\$733 68	
	\$1,096,617 01	\$1,096,617 01
· · · · · · · · · · · · · · · · · · ·		

Note.— Difference between \$441.86, for which Brooklyn City has taken credit in other accounts, and 747.75, subject to adjustment.

On What Account Paid.

Property used in operation of road	\$214,166 66
Earnings and capital stock	60,769 16
Other than above	2,915 69
	\$277,851 51
10000000000000000000000000000000000000	

Accrued Taxes Reported by Brooklyn Heights.

Other than above.	\$120,045 31
On property used in operation of road Earnings and capital stock	
	•

Brooklyn Heights Default June 30, 1894.

The following comparison shows the difference between the amount the Brooklyn City reported to have paid on account of the Brooklyn Heights, and the amount the latter charged itself with owing the Brooklyn City:

	Claimed l Brooklyn (by City.	Admitted by Brooklyn Heig	, hts.
Dividends	\$300,000		\$300,000	
Interest bonds	150,283	96	151,017	67
Taxes on property used in operation.	3,626	85	4,091	18
Total	\$ 453,910	81	\$455,108	85
Deduct amounts subject to adjust-				
ment	305	89	*1,503	93
· · · · · · · · · · · · · · · · · · ·	\$453,604	92	\$453,604	92
Comparison of Intere	st Account	8.		
Brooklyn C	ITY.			
Reported received from Brooklyn He	ights		\$ 121,733	30
Reported due from Brooklyn Height	s		150,283	
	•	-	\$2,017	26
		=		==
Brooklyn Hei				
Reported paid Brooklyn City			\$120,999	62
Reported due Brooklyn City			151,017	67
			\$30,018	05
			Ф 30,010	==
Brooklyn Heights Monthly 1	Passenger I	Rece	ipts.	
July	\$ 429,818	39		
August	390,591			
September	378,382			
October	\$358,495	73	\$1,198,792	34
November	322,780			
December	322,433			
1894.			1,003,709	44
January	\$302,122	5 8		
February	272,595	56		
March	328,089	30	000 -0-	
<u> </u>			902,807	44

	•-	•
April		
May		
June		
1	\$1,178,731	65
	\$4,284,040	87
From advertising, etc	19,076	58
Total earnings from operation	\$4,303,117	45
Receipts for Quarter Ending September 30,	1894.	
July \$437,577 03		
August		
September		
	\$1,247,844	
From advertising, etc	4,444	54
	\$ 1,252,289	48
Comparison Passenger Receipts.		
Quarter ending September 30, 1894	\$1,247,844	94
Quarter ending September 30, 1893	1,198,792	34
Increase, 1894	\$49,052	60

A careful examination of the manner in which the receipts of the road are collected taken from the time the fare is received by the conductor, its deposit in the receiving depot, its receipt by the officer of the company, and its final deposit in the bank, each day's receipts from such source being deposited in their entirety, and of the bank books showing the daily deposits, proves conclusively that the actual receipts are as stated.

Operating Expenses.

The net total on this account, as reported by the company, is \$2,673,391.73, and I have no hesitation in saying, as the result of the examination, that no item is charged against this account which does not belong there. In detail, the items that have been made the subject of criticism are, viz.:

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"Repairs of road-bed and track, \$141,570.53." The examination of this account shows that none of the cost for changing the road from horses to electricity was charged to the account, but that it was all for repairs of road-bed and track. The labor and material used in the repaving of the streets amounted in round numbers to \$70,000, and for the repairs of the track, \$71,570.53. The repairs to the pavement were caused by the settling of the paving done in the previous year, and because of the strict requirements of the department of city works, which ordered most of the repaving. The amount thus charged to repairs of track and special work, \$71,570.53, is not excessive. The statement that no repairs would be required upon the road-bed and track of a properly constructed electric railroad in five years, is not in accordance with the facts. With the very best construction, constant renewals of special work, repairs of joints and repairs of paving necessary.

"Renewal of horses, \$11,160." This is the amount paid the Brooklyn City Company for the horses that died during the year, in accordance with the terms of the agreement elsewhere explained. When the horse account is finally closed out, the Brooklyn Heights Company expects to realize enough from the total sales to reimburse itself for the amount paid on account of dead horses and all other expenses on this account.

"Trucking credit, \$139,311.39." The Brooklyn City Railroad Company, before its lease to the Brooklyn Heights Railroad Company, did its own trucking, and, therefore, turned over to the Brooklyn Heights Railroad Company a large plant for this pur-The latter company continued the operations of this plant, organizing it as a separate department, with which it opened a ledger account. To this account was charged labor of employes, feed, repairs of trucks and other expenses, all properly chargeable to the department. The department was credited in the ledger at a uniform rate per diem for the use of the trucks or wagons of . the department and a coresponding charge was made to the operating account for which the material was hauled. The construction account was also charged with the use of the trucks in the same manner and upon the same basis. The charge made per diem

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for the use of trucks was fixed so that the account would yield no profit, hence after charging the account with the proper expense and crediting the use of the trucks, the account balanced. would, therefore, have been no necessity for deducting the amount. viz.: \$139,311.39, had it not been that the statement of expense, table D, called for an enumeration which, in the judgment of the accountant, obliged him to again enumerate the expenses of the trucking department. For example, the wages of the men employed were put in the proper wage column, the horseshoeing, repairs to harness, stable equipment, and other expenses were also put in their proper account. The expense had already been charged to operation, and charged to construction in proper proportions in the per diem charges; if it had not also been again fully charged in the wage, provender and other appropriate accounts, there would have been no occasion for the credit to operation and consequently no criticism. There is no question that the use of a truck in hauling any supply or in the use of any operation account of the company, whether the cost includes the wages of the employes or other expense, should be charged against the account for which the service was rendered and the enumeration in table D should not have been construed as calling for the wages in this department. As it was put in, however, the report as rendered shows the correct cost of operation after the deduction is made.

All the remaining items of operating expenses were carefully verified by comparison with vouchers and investigation as to the character of charges, and I have no criticism to make regarding them.

Brooklyn Heights General Balance Sheet.

June 30, 1895.

ASSETS.

Cost of road	
-	
Current assets as follows, viz.:	13.641 92

Open accounts:

Due from Brooklyn, Queens County		•	
and Suburban Railroad	\$63,526 26		
Brooklyn City special construction	892,930 27		
Miscellaneous open accounts	44,989 73		
-		\$1,001,446	
Supplies on hand as per inventory		241,525	62
Total assets	•••••	\$1,736,19 3	92
LIABILITIES	J . .		
Capital stock	\$200,000 00		
Funded debt	•		
		\$ 450,000	00
Interest on funded debt due and accr Bills payable:	rued	4,420	00
Loans from banks and trust com-	•		
panies	\$500,000 00		
Mortgage on power house	14,000 00		
Mortgage, 77 Furman street	5,000 00		
		519,600	00
Open accounts:			
Brooklyn City rental default	\$112,761 32		
Bills on hand	147,425 72		
Sundry accounts	800 50		
Interest on bonds, Brooklyn City, ac-			
crued	10,583 30		
Trustee's guarantee fund	250,000 00		
-	·	521,570	84
Taxes accrued, not payable		•	
Rents accrued, not payable		3,322	
Profit and loss, surplus		115,520	
Total	·,······-	\$ 1,736,193	92

Brooklyn Heights General Balance Sheet, September 30, 1894.

ASSETS.

Cost of road and equipment	\$504,113	12
Supplies on hand	164,980	77
Accrued interest	45,337	5 0
Due by agents of this company on account of		
traffic	8,333	80
Due by other (not agents of this company) on ac-		
count of traffic	6,858	27
Due by companies and individuals (on open ac-		
counts other than traffic)	19,000	63
Cash on hand	338,096	84
Insurance (paid not due)	17,992	89
B. C. R. R. construction account	1,875,334	85
Rents due and accrued	3,736	99
Total	\$2,983,785	66

The Brooklyn City rental default, as admitted by the Brooklyn Heights Company, was \$455,108.85. Part of this was paid with the interest received from the guarantee fund, part of it is represented by the \$250,000 liability, the liability being transferred from "Brooklyn City rental" to "Trustees' guarantee fund," and the balance is the item of \$112,761.32.

LIABILITIES.

Gapital stock	\$200,000	00
Funded debt	250,000	00
Loans and bills payable	1,577,340	36
Interest on funded and floating debt due and ac-		
crued	11,443	63
Due for wages and supplies	132,632	25
Due companies and individuals (on open ac-		
counts)	14,680	59
Taxes accrued	199,933	60

Total	
Profit and loss, surplus	186,020 82
Due for supplies and contracts, construction	234,77608
Rental account B. C. R. R. Co	\$86,958 33

Brooklyn Heights Construction and Equipment on Account of the Brooklyn Railroad.

When the money of the Brooklyn City Railroad Company available for construction had all been expended, it became necessary under the terms of the agreement for the Brooklyn Heights Company to go on and complete the construction and make desired extensions. For the purpose of obtaining money to do this work, the Brooklyn Heights Company entered into an arrangement with the New York Guarantee and Indemnity Company, whereby it was agreed that necessary funds to the extent of \$3,000,000 should be loaned them for this purpose, upon notes made by the Brooklyn Heights Company and indorsed by the Long Island Traction Company. Under the terms of the lease the money so expended was to become in effect a lien upon the property of the Brooklyn City, to this extent: The Brooklyn City Company agreeing in the lease to reimburse the Brooklyn Heights Company either at the expiration of the lease or at such time and in such manner as might be agreed upon by the contracting parties, for all moneys expended in extending or bettering the properties of the Brooklyn City Company. A committee representing the persons from whom this money was to be obtained was appointed, consisting of David G. Legget, G. G. Haven, Jr., and George W. Young, all wellknown in financial circles, and before the agreement was made to loan the money upon the above conditions, the construction charges of the Brooklyn Heights Company against the Brooklyn City Company, were, at the request of the Brooklyn Heights Company, examined by an expert selected by the Guarantee and Indemnity Company, and the terms of the lease construed by the attorneys of such company.

Under the arrangement, all charges of this kind to construction are first passed upon by the directors of the Brooklyn Heights Company. They are then referred to the directors of the Brooklyn City Company, and if accepted by that company as a proper charge against construction, they pass the scrutiny of the committee acting in behalf of the note holders before payment is made. It will be seen, therefore, that the three interests involved in the making of these charges are, first, the Brooklyn Heights Company, anxious to charge to construction all expenditures that properly belong there; secondly, the directors of the Brooklyn City Company, desirous of protecting the interests of their corporation by preventing any improper charge to construction; and thirdly, the committee representing the note holders, who must see that the investment is properly secured.

Such of these notes as have been issued have been placed upon the market at a discount of from 15 to 20 per cent. The charge against the Brooklyn City Company, however, has been the actual cost; in other words, the face of the voucher and the discount will have to be met by the Brooklyn Heights Company and can not become a charge to the construction account of either road under the arrangement. It would appear from this that the interests of the Brooklyn City Company are amply protected. Up to June 30, 1894, the Brooklyn Heights Company had expended on that account \$892,930.27. It has been agreed that the proceeds of the sale of old material, or such as has become useless to the company through the operation of the conversion, or of the sale of real estate no longer necessary to the company, shall either be turned over to the directors of the Brooklyn City Company, to be expended by them in making extensions, shall be expended by the directors of the Brooklyn Heights Company in extensions, or shall be applied to the reduction of the construction account created in the manner above described. All moneys received up to the date of the last annual report from the sale of horses or material have been credited to the construction and equipment accounts of the Brooklyn City Railroad, either directly or through the contingent construction account.

The following is the contingent construction account in detail, showing amount expended, and credits to the account since January 1, 1894, including \$15,720.21 expended prior to that date:

EXPENDITURES.

For cars	\$616,540 7 275,290 5 167,578 2 660,836 9 15,720 2	59 29 3	73
CREDITS.			
Sale of old material	\$ 12,347 1	1	
Sale of horses	139,515	00	
Credit on account of dead horses	4,440 (00	
Cash advances	520,121 2	28	
-		- 676,423 3	39
Total debit		. \$1,059,543 3	 34
Deduct unpaid bills		. 166,613 0)7
Net amount Brooklyn City construct as per Brooklyn Heights report	• •		 27
On September 30th, the net amount of was.			35

Guarantee Fund.

The following is a statement of the guarantee fund deposited by the Brooklyn Heights Company as security for the faithful performance of its contract set forth in the lease with the Brooklyn City Company. It consists of bonds of the Brooklyn City road of the par value of \$1,860,000 purchased at \$107.50; market value, \$1,999,500; \$2,000,000 first mortgage bonds of the Brooklyn, Queens County and Suburban Railroad, and \$500 in cash, aggregating \$4,000,000.

The withdrawal of \$250,000 from this fund by the Brooklyn Heights Company consisted of \$233,000 of bonds from the Peoples' Trust Company. The bonds of the Brooklyn road have recently been sold at a premium of \$15.25, and the bonds of the Brooklyn, Queens County and Suburban are now worth \$102 at market value, therefore, notwithstanding the withdrawal of \$233,000 par

of Brooklyn City bonds, the deposit is worth:

	Par value.		Market value.
Brooklyn City bonds	\$1,630,000	00	\$1,862,275 00
Brooklyn, Queens Co. and Subur-			
ban bonds	2,000,000	00	2,040,000 00
Cash	5,000	00	500 00
Total	\$ 3,630,500	00	\$3,902,775 00
		===	

Note.— Brooklyn City consolidated 5 per cent. bonds.

Fixed Interest and	Dividend	Charges o	f Brooklyn	Heights	Railroad
Compan	y on Acco	unt of Bro	oklyn City	Rental	

·	
\$12,000,000 capital stock at 10 per cent. per annum	\$1,200,000
\$6,000,000 Brooklyn City Railroad consolidated	
mortgage bonds, at 5 per cent. per annum	300,000
\$200,000 crosstown Railroad first mortgage bonds,	
at 5 per cent. per annum	10,000
\$200,000 Calvary Cemetery Railroad bonds at 6 per	
cent. per annum	12,000
.\$200,000 New W. and I. Railroad mortgage bonds,	
at 7 per cent. per annum	14,000
\$125,000 Greenpoint and L. street mortgage bonds,	
at 6 per cent. per annum	7,500
\$200,000 Grand Street and N. Railroad mortgage	,
bonds, at 5 per cent. per annum	10,000
_	\$ 1,553,500

BROOKLYN CITY RAILROAD COMPANY.

Stocks and Bonds.

Capital stock, guaranteed at 10 per cent. per annum	\$12,000,000
Consolidated first mortgage 5 per cent. bonds, Brooklyn City Railroad, due 1941	6,000,000
cent. bonds, due 1907	200,000
Crosstown Railroad first mortgage 5 per cent. bonds, due 1908	200,000
New Williamsburgh and Flatbush Railroad first	900 000
mortgage 7 per cent. bonds, due 1897 Greenpoint and Lorimer Street Railroad first mort-	200,000
gage 6 per cent. bonds, due 1910	125,000
5 per cent. bonds, due 1906	200,000
	#10.00× 000

\$18,925,000

Cost of Road and Equipment.

The only portion of Mr. Thompson's criticism not already considered it that of relating to the construction and equipment account of the Brooklyn City Railroad. The force of this criticism depends upon the determination of the question what proportion of the expense of changing a road from horse power to electric power is a charge to betterment. If horse power had been continued the cost of replacing worn-out tracks and equipment should have been charged to operating expenses, as the maintenance of the electric road must now be charged. But the tracks and equipment of the horse roads that have changed to electric power were not worn out. A new condition of things came into existence. Improved service was demanded. Increased revenues were certain to result. Stockholders subscribed their money to make a radical and complete change in the system of operation and expected that their roads would earn enough to take care of the new stock and bond issues, the proceeds of which were all to be expended for construction and equipment, as well as of the stocks and bonds then outstanding representing the cost of the road up to the time of the change. In many cases it has actually cost more to take up the old construction and put down the new than if there had been no old road.

The conversion from one method to the other was not the maintenance of the horse road in any respect. The latter was to pass out of existence. Its place was to be taken by new rails, new equipment, a new method of transit. The earnings of the improved method have in all cases justified the charge of the entire cost of conversion as a betterment to the property. Wherever the horse-car tracks were found to be suitable for use under the new system they were used, the cost of wiring, etc., being charged to construction as a betterment, and properly so. Wherever the old tracks were not suitable they were replaced by construction much better in every way than that required for horse cars, and the whole cost charged to construction less the amount received from the sale of useless material. It might be said that as the horse-car tracks would have to be kept up by charging to operating ex-

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penses, a portion of the new construction should be charged to operating expenses. The reply is, that the track as it was would have answered for a long time to come for horse traction; that new conditions required the substitution of the new method, forcing practically the throwing away of the old construction.

Whenever an application has been made to your honorable board for permission to increase capital stock in order to change motive power, the basis of such increase has been the total estimated cost of the conversion without any deduction on account of the value of the property the new construction was to replace; consequently, while the question has not been especially considered by the board, the effect of its action in this respect and in the acceptance of the annual report of the companies that have made such charges has been to recognize the propriety of the charges.

It is not the Brooklyn lines alone that are interested in the settlement of this question, but every surface railroad system in the State that has changed its motive power from horse to electricity. From an investigation into this subject since the completion of this examination, and an examination of the construction accounts of several of the large electric systems of the State, I find that the custom has been to charge construction and equipment with the entire cost of conversion, crediting these accounts with the moneys received from the sale of useless material. I believe this is the correct principle, and that the Brooklyn City Company acted propelry in charging the total cost of its conversion to construction and equipment. I find that all moneys received from the sale of old material have been properly credited.

Interest and Discount Charged to Construction.

Against the construction account of the Brooklyn City Company appears a charge of \$102,345.78 interest and discount. This amount includes an item of \$90,000, part payment of a dividend on stock, and the entire charge is criticised by Mr. Thompson. In the book of instructions, entitled "Explanations for Guidance of Railroad Companies in Making Reports to Board of Railroad Commissioners," prepared by Mr. Thompson and issued when he was the accountant of this board, appears a direction as follows:

"All interest and discount paid in obtaining funds for construction should be charged under this heading and not prorated through the various other items."

In the blank, also prepared by Mr. Thompson, for making annual reports, this line appears, under the heading, "Cost of road," viz.: "Interest and discount charged to construction." This was a notification to the companies reporting to this department that there could be such a thing as interest charged to construction upon money borrowed for the purpose of bettering the road, and it has been the custom of this board to accept such reasonable charges as has been made by other roads on this account without question. In the case of the Brooklyn City Company its directors were borrowing money for construction during the whole period of the conversion of the road from horses to electricity, pending the issue of stocks and bonds, the proceeds of which were finally to pay for the conversion. I think, under the circumstances, the item of \$62,345.78 was, therefore, a proper charge. \$90,000 was credited to income in the annual report for the year ending June 30, 1893. It was also debited to income as a payment of dividend, and the change in the disposition of the account was made in June, 1893, by the board of directors of the Brooklyn City Company, after an examination of the accounts of the company by the executive committee, and a full report to the board of directors of the Brooklyn City Company, after an examination of the accounts of the company by the executive committee, and a full report to the board of directors recommending a number of changes which were at the time made, and which appeared in the totals of the annual report to June 30, 1893. The explanation of the \$90,000 charge given by the company is that at the time the money was obtained, of which the interest charge was made, the company was in need of funds to continue its work of conversion. The country was passing through a season of financial depression. The company could not borrow money except on a demand loan: therefore, stock was issued which became entitled to dividends, although the construction on account of which the money was expended was earning nothing. If the company could have borrowed the money it would have done so, and would have a comparatively small rate of interest; the directors believed they were justified in charging to construction the difference between the amount of interest they would have paid on a loan and the dividend paid on the stock. The question raised by this criticism seems to be one of financial policy rather than of bookkeeping, and I submit it to your board without comment.

The following is a statement of the Brooklyn City construction account:

Cost of Road and Equipment to June 30, 1894.

Road-bed, superstructure and electrical appli-	
ances	\$7,988,641 66
Buildings and fixtures, all real estate	5,969,629 75
Interest and discount charged to construction	152,345 78
Equipment	4,729,316 94
	\$ 18,839,934 13

Expended during the year ending June 30, 1894.

Electrical appliances pertaining to road and	
superstructure	\$1,735,030 75
Buildings and fixtures	1,395,581 26
Interest and discount charged to construction	34,726 11
Equipment	1,320,056 32
-	

\$4,485,394 44

YEAR.	Cost of road.	Equipment.	Total.
1890 1891 1892 1893	\$289,426 49 3,928,899 83 848,850 86 2,912,372 18 3,165,338 12	\$160,309 40 724,469 62 232,076 25 962,316 70 1,327,997 32	\$149,735 89 4,653,369 45 1,080,927 11 3,874 688 83 4,493,335 44
Totals	\$ 11,144 887 48	\$3, 407, 169 29 123, 633 50	\$14,552,056 77 123,633 50
Expended prior to September 30, 1889	\$11,144,887 48 2,965,729 71	\$3, 283, 535 79 1,445, 781 15	\$14,428,423 27 4,411,510 86
Grand totals	\$14,110,617 19	\$4,729,316 94	\$18,839,934 13

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The construction account of 1891 includes \$4,102,734.64 paid for acquired lines, and the account for 1892 includes \$71,087.94 expended for the same purpose. The aggregate of these items has been disturbed and charged to cost of road-bed, real estate and equipment, in proper proportion.

Cost of Conversion to June 30, 1894.

The following shows the aggregate cost of the Brooklyn system as a horse car line and the cost of the conversion from horse to electricity up to June 30, 1894:

Total cost of construction to June 30, 1890	\$ 4,861,246 7 5
Cost of acquired horse car lines	4,173,822 58
	\$9,035,069 33
Cost, excluding cost of acquired lines since June	
30, 1890	9,804,864 80
	\$ 18,839,934 13

When the application for the increase of the capital stock of the Brooklyn City Company from \$6,000,000 to \$12,000,000 was made in 1892, the estimated cost of the expenditures on account of which the increase was asked, was \$6,908,000. As the construction progressed it was found that much of the track then in use, which it had been assumed could be utilized would have to be replaced by a heavier rail. An additional power house was also found necessary, and it may fairly be said that the estimate as presented to this board was fully 20 per cent. less than the actual cost of the In addition to the work contemplated in the estimate, a number of extensions have been built which have added to the total cost; and the total construction account up to September 30, 1894, including the money spent by the Brooklyn Heights Company on account of the Brooklyn City construction, was \$20,915,268.98. At least \$1,000,000 more will have to be expended before the conversions and extensions are completed.

The aggregate cost of the extensions and improvements, not included in the estimate of 1892, amounted to over \$2,500,000 on June 30, 1894.

Most of the construction was done during the years 1893 and 1894, and upon the old lines operation and construction were both going on at the same time. A great deal of work had to be done at night, and it was more expensive on that account. The report of Mr. Baxter, your engineer and inspector, which is appended to and made part of this report, shows, however, owing to the causes above enumerated and to the further fact that improvements were constantly being made in electric appliances, it has not been extravagant, and what has been done has been so well done that the company will reap the benefit of its permanency. Mr. Baxter's report will be found to more fully describe the physical condition of the road-bed and the character of the betterments.

Income Account.

The income account of the Brooklyn City Company is fully treated in connection with the analysis of the income account of the Brooklyn Heights Company.

Operating Expenses.

The table of operating expenses shows a net deficit of \$20,225.63. This is represented by the payment of obligations incurred prior to June 6, 1893, from which is deducted that part of the receipts due the Brooklyn City Company on account of service rendered prior to June 6, 1893, and not actually received until after June 30, 1893.

There is nothing further in connection with the Brooklyn City report which seems to require examination. Submitted herewith are the lease of the Brooklyn City Railroad to the Brooklyn Heights Railroad Company, bearing date of February 14, 1893, the charter of the Long Island Traction Company, and the report of the inspector and engineer.

There is nothing to be said regarding the lease except that its conditions and requirements appear to have been fully observed by both corporations, and so far as this investigation shows, it is demonstrated that the Brooklyn City Company has received every possible protection, not only as to the preservation of its property, but in the enforcement of the rental payments by the Brooklyn Heights Company. The quarterly report of the Brooklyn Heights Company for the quarter ending September 30, 1894, shows that all moneys due the Brooklyn City Company on June 30, 1894, have been paid, and that full provision has been made for future rental payments. At the time the lease was made the outstanding capital stock of the Brooklyn City Railroad Company was \$9,000,000. The total number of votes cast by the stockholders on the question of the lease was 807,797; in favor of the lease, 806, 632, and against, 1,165.

BROOKLYN CITY RAILROAD COMPANY.

Officers and Directors, June 30, 1894.

Edward Merritt, president pro tem., Brooklyn, N. Y.

Thomas P. Swin, secretary and treasurer, Brooklyn, N. Y.

Edward Merritt, Brooklyn, N. Y.

S. L. Husted, Jr., Brooklyn, N. Y.

David L. Legget, Brooklyn, N. Y.

Edward D. White, Brooklyn, N. Y.

Samuel W. Powne, Brooklyn, N. Y.

George W. Bergen, Brooklyn, N. Y.

F. A. Van Iderstine, Brooklyn, N. Y.

Alonzo Slote, Brooklyn, N. Y.

Charles S. Osborne, Brooklyn, N. Y.

R. L. Edward, Brooklyn, N. Y.

W. Cary Sanger, Brooklyn, N. Y.

John C. Barron, Brooklyn, N. Y.

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BROOKLYN HEIGHTS RAILROAD COMPANY.

Officers and Directors, June 30, 1894.

Daniel F. Lewis, president, No. 168 Montague street, Brooklyn, N. Y.

W. A. H. Bogardus, general manager, No. 168 Mantague street, Brooklyn, N. Y.

Cyrus P. Smith, secretary and treasurer, No. 168 Montague street, Brooklyn, N. Y.

J. C. Cameron and W. N. Morrison, superintendents, Brooklyn, N. Y.

Daniel F. Lewis, Brooklyn, N. Y.

E. W. Bliss, Brooklyn, N. Y.

Felix Campbell, Brooklyn, N. Y.

Crowell Hadden, Brooklyn, N. Y.

Silas B. Dutcher, Brooklyn, N. Y.

Seth L. Kenney, Brooklyn, N. Y.

David H. Valentine, Brooklyn, N. Y.

Henry D. Polhemius, Brooklyn, N. Y.

W. S. Sloan, New York city.

A. Abraham, Brooklyn, N. Y.,

Frank Bailey, Brooklyn, N. Y.

Summary.

In summarizing the results of this examination, I most respectfully report:

First. That the Long Island Traction Company is not a corporation required to make reports to your board. It is true the collateral trust notes indorsed by the Long Island Traction Company, on account of the Brooklyn City construction, are a liability ahead of the stock of the Long Island Traction Company, and they should be. Whatever value in connection with its ownership of the stock of the Brooklyn Heights Company the Long Island Traction Company's stock may have, will be based upon the earnings of the Brooklyn City Company, and the greater the improvement

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in the Brooklyn City property the larger will be its earning power and the more speedily will the Long Island Traction Company be enabled to realize upon its investment in connection with this property.

Second. The amounts of the Brooklyn Heights Company are correct and properly set forth the transactions of that company. The terms of the agreement with the Brooklyn City Company have been fully and faithfully complied with, and at the time of this examination all amounts due the Brooklyn City Company had been paid.

Third. The money obtained by the Brooklyn City Company from the sale of its stocks and bonds, for the purpose of changing the motive power of its road from horses to electricity, has been properly expended and charged to the proper accounts. These accounts have received full credit for the sale of all useless material, and the relations of the Brooklyn City Company with the lessee company have been controlled in all respects by the terms of the lease. The small amounts of difference between the income accounts of the Brooklyn City and Brooklyn Heights companies, growing out of the confusion incident to the changes in operation, and the different systems of bookkeeping, the amount of which is \$281.03, have all been fully explained.

Fourth. Relative to the inadequacy of the present blank upon which the reports of street surface railroads are required to be made to your honorable board, I would respectfully recommend a conference of the accountants of the street surface systems of the State, under the auspices of this board, to the end that such changes be made in the form as will meet present requirements. Also that at the same time an effort be made to secure greater uniformity in the methods of accounting on the part of these companies. All of which is respectfully submitted.

CHARLES R. DeFREEST.

Secretary.

Action of the Board.

After the reading and consideration of the foregoing report, the following resolution was unanimously adopted by the board.

Resolved, That the report of the secretary of this board in relation to the Brooklyn City and Brooklyn Heights Railroad companies, and the Long Island Traction Company, be and the same is hereby accepted, and its conclusions and findings concerning the accounts of these companies approved.

APPENDIX.

REPORT OF F. K. BAXTER, INSPECTOR.

Hon. Charles R. Defreest, Secretary State Board of Railroad Commissioners, Albany, N. Y.:

Dear Sir.— Agreeably to your request, a careful examination of the physical condition of the Brooklyn City Railroad Company has been made, and the following is most respectfully submitted:

The power stations were first visited. They are three in active operation, as follows: The eastern, which is the largest, and is located at the corner of Kent and Division avenues; the southern, at the foot of Fifty-second street, and the Ridgewood station on Wyckoff avenue, near Myrtle avenue. An unused station, at the corner of Second avenue and Fifty-second street, is now for sale. Your inspector, in the inspection of these stations, found everything modern, material and workmanship of the best, and the machinery all in perfect running order, stable and permanent. method of handling coal is very economical. The appliances all appeared of modern construction and well cared for. structures were also found well and durably made. Allis Company, of Milwaukee, Wis., had furnished the engines, and these were found working smoothly, and without the vibration usual in many instances. The electrical generators were in extra good condition, and installed with all the latest and improved devices for the control and regulation of the machines and No. 98.] 1733

their current output. Protection from the effects of lightning and short circuits from any cause were noted in each instance. Great care has been taken in the foundation construction, concrete and granite being used in large quantities, with Portland cement. Stability is apparent everywhere, even in minor parts. Room is noted in each station for additional power if needed in the future. The boiler batteries were found in excellent condition, and ample room for additions was noted.

It is somewhat difficult to compare the cost of power generated in power stations in different parts of the country. The variation in the size of cars, difference in size, efficiency and number of motors used for cars, difference in grades over which cars are propelled, and the different percentage of loss in the transmission of power station to the cars, are some of the hardest factors to overcome and equalize. The unit of comparison which is used generally is the cost of power per car per mile. If the ampere hour unite at the station was used, many of the difficulties would disappear, as this unit does not vary. The cost per car mile for the last six months upon this system reached as low as one and one-tenth cents, and has not been above one and twenty-five hundredths cents. The nominal horse power of the three stations reaches close to 17,000. The maximum capacity would considerably exceed this easily.

The overhead work was carefully noted upon all the lines, and was found as desirable as could be expected. The wires were taunt, of ample size, well and securely connected and carefully attended to. Guard wires were found up in all instances where there was a possibility of other wires falling upon the trolley wires. The poles were found of extra material, well and securely set in the ground and all strongly maintained. The trolley wires are of hard drawn copper, No. 10 B. and S. guage. The span wires, supporting the trolley wires, are of galvanized iron, and are insulated from the trolley wires and from the poles. The copper "bonds" which connect the rails are bounded to supplementary wire running parallel to the rails the entire length of the line. The arrangement of the return current cables and feed system was

found complete and in extra condition and very well cared for. The matter of electrolysis has been also well cared for, and the near future will no doubt see this troublesome feature entirely Repair gangs were noted upon days of inspection and appearances indicated close attention upon every line. system, the second largest in the world (The Boston West End Company being the largest), has some 200 miles of single track. Most of the lines have double tracks, which greatly facilitates the traffic. In addition to the main trackage there are 100 crossovers, averaging 60 feet each, making a total of 6,540 feet. A careful inspection of the tracks upon each of the lines showed an excellent state of maintenance. The different kinds of rail in use are as follows: Lewis & Fowler box girder, five inches high and weighing 65 pounds per yard; nine-inch girder, twelve bolts per joint; center bearing on horse car rails; side bearing rail; steam rail; T. form and Johnson six-inch girder rail. The surface and adjustment of tracks were noted very good, showing constant care. The pavements adjacent to the tracks and between them are, as a rule, in good condition upon each of the lines. The lines extending to the suburbs were noted paved and exceptionally cared for. The new 9-inch girder rail recently laid upon Fulton street became necessary owing to increased traffic. Several of the lines will, the coming season, be laid with this heavy "section rail." The car repair shop upon Fifty-second street were found in perfect condition, and the outfit there is quite Nearly all repairs are made there, and all cars equipped, some 1,600 in number. The change in power to electricity upon the 24 lines, was made from May, 1891, to September, 1894.

The company owns 42 parcels of real estate, upon which are located, with few exceptions, car-houses, stables, shops, transfer station, etc. Each of the buildings was examined and found well cared for, and of good construction, a number being of stone and brick. The area of the above parcels, ranges from 1,875 square feet to 229,561 square feet. This class of property is generally closely watched and maintained, as its great value deserves. In

round numbers, this company has 800 closed and 800 open cars. The general condition of the cars was found very good. motors' running parts, and car proper, receive daily inspection, and repairs are made whenever needed, without delay. dummy lines were inspected and found to be in good condition as regards track, road-bed, and the like. Your inspector was informed that these lines will in the near future, be modified to electric power. Calculation shows that power stations are together capable of operating 425 miles of single track, with all the cars required, which will not be less than about 1,650 per day, without laying another brick or any other work, excepting, perhaps, the addition of 4 engines, 8 batteries of boilers and 6 generators, the foundations for which are already erected and provided for. Since the erection of the eastern station, this company has furnished the Brooklyn, Queens County and Suburban Railroad Company with power. With machinery added, as above referred to, the stations will run the Brooklyn Heights system, the system of the Brooklyn, Queens County and Suburban Railroad, and 173 miles of extension, when completed, which are owned by the above-named companies. In conclusion, your inspector would say, that the whole system, in its physical condition, shows intelligent maintenance, modern construction, and proper safety on the various track surfaces.

Very respectfully,

F. H. BAXTER,

Inspector.

Dated Albany, N. Y., December 11th.

Complaint of H. M. Thompson.

NEW YORK, October 15, 1894.

To the Honorable Board of Railroad Commissioners of the State of New York, Albany, N. Y.:

GENTLEMEN.— The Long Island Traction Company is a corporation, formed under the laws of West Virgina, with a capital of \$30,000,000, which was issued at 15 cents on a dollar, or \$4,500,000.

The Brooklyn Heights Railroad Company is a corporation

formed under the laws of the State of New York, April 1, 1887, and owns a railroad one-half mile long in the city of Brooklyn. The capital stock of this company, amounting to \$2,200,000, is owned or controlled by the Long Island Traction Company. It had also a bonded debt of \$250,000.

The Brooklyn City Railroad Company, is a corporation formed under the laws of the State of New York, December 17, 1853, and owns a system of railroads 951 miles long in the city of Brooklyn, and has a capital stock of \$412,000,000, and a bonded debt of \$6,925,000. This railroad, together with all equipment, real estate, etc., is operated by the Brooklyn Heights Railroad Company under a lease bearing date, February 14, 1893. The Long Island Traction Company, I am informed, has never made any report to The Brooklyn Heights Railroad Company, as owner your board. and lessor, have made reports to your board for the fiscal year ending June 30, 1893 and 1894. I am a stockholder in the Long Island Traction Company, and the purpose of this communication is to present to you certain objections to these reports, which are as follows:

Report of Brooklyn Heights Railroad Company, June 30, 1894.

Page 7. Rentals paid, \$1,434,941.50, no details to show what is included in this, and it is at variance with page 7 of the Brooklyn City Railroad Company's report as to rentals received. All other fixed charged differ in large amounts and the difference seems too large in taxes to be accounted for by taxes paid on the property of the Brooklyn Heights Railroad Company proper.

Page 9. Renewals of horses, \$11,160. As the horses on hand June 30, 1893, page 722 of 1893, report of Railroad Commissioners, numbered 4,648, few, if any, purchases were necessary to finish up the operation by horse power, therefore, the 4,648 horses leased must have been sold or worn out, and no expenditure of capital was necessary to keep up stock; that being so, this account should be charged with a certain depreciation from invoice price, or else large earnings would be derived from motive power, which costs nothing. Page 9. Trucking credit, \$139,311.39. What item in operating expenses was this account charged to that it should be

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credited to operating expenses? What amount was it debited to, to balance this credit, and for what reason?

Page 9. Repairs, road-bed, etc., \$141,570.53. Does this contain any of the cost of changing road from horse to electric power, or was that all charged to Brooklyn City Railorad construction account? It certainly is a very large expenditure for repairs of a road the larger part of which had been laid out about one year, and the cost of which was so large as to warrant the belief that it was an extraordinarily well-built road, and that no repairs of consequence would be required for at least five years.

Report of Brooklyn City Railroad, June 30, 1894.

Page 5. Interest charged to construction, \$152,345.78, \$117,619.67 of which is 1893 report, page 720 of Railroad Commissioners' re-This is not a proper charge here, but should be charged against income. There was plenty of capital stock and bonds on hand, and money was borrowed to save interest, as the loans could be obtained at 4 or 5 per cent., while dividends on the stock would have been 8 per cent. Certainly, if the bonds and stock had been issued, dividends on stock and interest on bonds would not be a proper charge to construction. No such practice obtained with this company in former years. All payments of interest on floating debt was charged against income, and would have been in this instance had not my figures been reversed. report to your board for quarter ending September 30, 1892, made by me as secretary and treasurer, I charged against income estimated amount for that quarter for interest on loans. port for quarter ending June 30, 1893, made under oath by my successor in office (Mr. Bogardus), my charges were reversed by saying "Improperly estimated," but no explanation was offered as to why, and as I made my report under oath and still adhere to the correctness of that report, I respectfully request, that your honorable board take measures to set this matter right.

In report of June 30, 1893, page 721 of the Railroad Commissioners' report, \$90,000 is credited to income for interest on stock issued for construction. If this credit is proper, the debit should be against income as well.

Page 6, reconstructing road-bed, etc., \$1,184,557.29; and for the same purpose, in 1893 report, page 721, Railroad Commissioners' report, \$1,044,511.90; altering depots, \$117,012.75; altering horse cars into electric cars, \$327,372.02. Was any proportion of these kinds of expenditures charged to operation expenses? above payments for reconstructing road-bed, are there included any payments for repairs of tracks after rails were laid? road was fully constructed and equipped before the change from horse to electric power, and the cost thereof charged to construction and equipment paid for from proceeds of stock and bonds, it is not proper under a simple change of the motive power to charge the entire cost thereof to construction and equipment. horse power had been continued the cost of relaying worn-out tracks and replacing worn-out equipment would have been charged to operating expenses as repairs, the company having earned its profits out of the capital originally invested. Therefore, capital account should only be charged with betterments of the new road over the old, and all new work pertaining to electric traction exclusively, and the balance should be charged against earnings as As to repairs of rails after laying, to charge maintenance to construction account is so much water, and when you inventory road you will find construction account debited with more than inventory. If everything is taken at cost, road once constructed and equipped must be kept up to cost by repairs charged to operating expense; but if renewals and rebuildings are charged to construction, that account will finally be debited with more cost than stock outstanding, and if stock is increased to balance that an inventory and equipment will show prices paid double of what it could have been furnished for, and stockholders will find they do not own as much property as they have been led to believe by published reports.

Page 7, rentals, fixed charges, dividends, etc., do not correspond with payments by Brooklyn Heights Railroad Company. The rental should be credited in full, and the payments would balance it, and the deficit of \$812,041.94 should not appear, as on page 1

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it gives terms of lease to be payments of fixed charges, dividends, interest, etc.

About August, 1892, your board granted to the Brooklyn City Railroad Company an increase of its capital stock from \$6,000,000 to \$12,000,000, at which time there was filed with you an estimate of the cost of changing the motive power, which, under a liberal allowance, was less than \$7,000,000. There was then \$3,000,000 of the first mortgage bonds unissued, which were reserved in most part for any needed extensions. The stock was placed at par. producing \$6,000,000. The bonds were placed at a premium, and produced \$8,212,916 (as per report), and there has been taken from the guarantee fund of the Long Island Traction Company \$250,000, and collateral trust notes have been issued, as I am informed, for \$3,000,000, making an amount of capital produced of \$12,462,916; in addition, horses have been sold for quite an amount. What the exact expenditure has been on account of construction and equipment I am unable to say, but if the item for interest on loans, now charged to construction, be transferred to the debit of income, where, I claim, it belongs properly, and if there be proportions of the cost of changing motive power and charges for repairs of rails, to be credited to construction and equipment and debited to income, which an examination of the books will decide, then there will be a material correction to be made in the income account of this property, as shown in reports. When the Long Island Traction Company was formed, the stockholders of the Brooklyn City Railroad Company were invited to invest in its stock, it being represented that the lease of the Brooklyn City Railroad Company system would be very profitable; and there were other securities held by the company which were a further guaranty that the investment was a good one. Under the date of September 5, 1894, the directors of the Long Island Traction Company issued a circular to its stockholders, stating that more money was needed and collateral trust notes for \$3,000,000 had been created, secured by assignment of all its rights, title and interest in These notes were to be payable in three years, these securities. with interest at 6 per cent., and were to be floated at a discount

of from 15 to 20 per cent. This scheme, as presented, subordinates the stockholders to the noteholders, and the former must be satisfied with the usual estimates of future profits, while the management will be controlled by three persons, to act as trustees, and to whom is to be assigned the voting power on the stock of the lessee, the Brooklyn Heights Railroad Company, until the notes are paid.

In view of the foregoing, I respectfully request that your honorable board order an investigation of the accounts and affairs of these companies, to the end that those who are interested may know the actual condition of the property.

Very respectfully,

(Signed.) F. M.

F. M. THOMPSON.

26 Cortlandt Street, New York.

Answer to complaint.

LONG ISLAND TRACTION COMPANY, BROOKLYN, N. Y., November 10, 1894.

To the Honorable Board of Railroad Commissioners, Albany, N. Y.:

Gentlemen.—Your favor of the 30th ultimo, containing a complaint of H. M. Thompson against the Brooklyn Heights Railroad Company, the Brooklyn City Railroad Company and the Long Island Traction Company, has had careful consideration. The reply thereto on the part of the Brooklyn Heights Railroad Company has been forwarded to-day The Long Island Traction Company is a corporation organized under the laws of the State of Virginia, and is not a railroad corporation. We are, for this reason, under the impression that you will not care to take up the examination of the books and accounts of that company, particularly as the books of the Brooklyn Heights and Brooklyn City companies will furnish a complete answer to charges made.

Yours respectfully,

DANIEL L. LEWIS,

President.

Brooklyn City Railroad Company, November 9, 1894.

To the Honorable the Board of Railroad Commissioners:

Your favor of the 30th ultimo, addressed to Daniel Lewis, president of the Brooklyn Heights Railroad Company, containing a copy of the complaint of H. M. Thompson against the Brooklyn Heights Railroad Company, the Brooklyn City Railroad Company and the Long Island Traction Company, was referred to us by Mr. Lewis, and the complaint has been carefully considered.

So far as the complaint relates to the account of the Brooklyn City Railroad Company we believe that the accounts of that company are correct, and that the claims of the complainant in criticism of these accounts absolutely untenable and unfounded. If you desire to verify this we request that you will appoint a representative of your board to make such an examination of our books and accounts as you may deem desirable and to assure yourselves of their correctness, and we further request that such examination be made as soon as possible.

Yours respectfully, the Brooklyn City Railroad Company, EDWARD MERRITT,

President.

Brooklyn Heights Railroad Company, November 10, 1894.

To the Honorable Board of Railroad Commissioners, Albany, N. Y.:

Gentlemen.— Your favor of the 30th ultimo, containing a copy of complaint of H. M. Thompson against the Brooklyn Heights Railroad Company, the Brooklyn City Railroad Company and the Long Island Traction Company, is at hand and contents carefully noted. It is not practicable to make a written answer to the complaint in order to do this subject justice and to satisfy your honorable board of incorrectness of the charges of the said Thompson and of the propriety of the manner in which our business has been conducted, including the accounts of the company. We would

respectfully request that you appoint a representative from your board to make such examination of the books, accounts and property of the company as you might deem wise and proper, and in that way secure for yourselves an intimate knowledge of the affairs of the company, and also to satisfy yourselves of the correctness of its accounts. We urgently request that such examination be made at the earliest possible date. Regarding the reference to the Brooklyn City Railroad Company's accounts in your said favor of the 30th ultimo, and the request for an answer from that company, I would state that you will receive a separate reply from them.

Yours respectfully,
DANIEL L. LEWIS,
President.

EXPLANATIONS.

For the Guidance of Railroad Companies in Making Reports to the Board of Railroad Commissioners of the State of New York, in Accordance With the New Form Adopted March, 1884.

STATE OF NEW YORK,

Office of the Board of Railroad Commissioners, Albany, August 1, 1884.

To the Accounting Officers of All Railroad Companies in the State of New York:

Gentlemen.—In order to secure uniformity in the annual reports that are to be made to this board for the year ending September 30, 1895, and subsequent years, in accordance with the form adopted in March last, the following explanations are presented:

You will particularly note that for the year ending Septeber 30, 1884, the form of the report heretofore used will be again used. The following explanations should be observed in order to comply with the form of the report to be made for the fiscal year ending September 30, 1895, and thereafter.

To avoid the necessity of returning for correction reports once filed, it is desired that you will conform to the classification and distribution of accounts as given herein under the respective headings, and your especial attention is invited to the computation of percentages and averages. Where there is nothing to report, under any of the headings, please so designate by use of a cipher, that it may be understood the item has not been overlooked.

In making quarterly reports for quarters ending March 31, June 30, September 30, and December 31 each year, observe the explanations given under similar headings for anual reports, only that the statements of earnings, etc., will be for three months and the general balance sheet will show the ledger balances on the date of the close of each quarter. Under "Deductions from Income," enter one quarter's proportion of the annual amount of interest on funded debt and rentals of leased lines and an estimate, where not known, of taxes based on the amount paid for previous year, and observe carefully that dates, percentages, etc., are filled in as called for.

Communications relating to railroad accounts, reports and statistics should be addressed to the board and marked "Accountants' Department."

By order of the Board of Railroad Commissioners,

H. M. THOMPSON,

Accountant.

Companies operating steam railroads as owners or lessees, or both combined, will note the following explanations in filling in . the form for annual reports to the board.

HISTORY OF ORGANIZATION, CONSTRUCTION, LEASING, ETC.

Under this heading give details as concisely as possible, and in cases of leases state particularly the date of commencement and expiration, consideration and how and when payable, and whether expenditures made by lessees for additions and betterments are to be refunded to such lessees, etc.

TABLE A.

CAPITAL STOCK AND FUNDED DEBT.

To be used for lines owned. That pertaining to leased lines will be reported by the lessors.

TABLE B.

COST OF ROAD AND EQUIPMENT.

No expenditure should be charged here unless it be for actual increase in construction or equipment on lines owned. In cases of renewals or repairs when expenditures are incurred beyond what is necessary to make good any depreciation of road or equipment, such extra expenditure should be charged to this account.

Any expenditures made by lessees for improvements on leased lines and for which they are to be reimbursed by the lessors, should not be included by lessees in expenditures for improvements on their own road, but reported immediately after the close of the current year to the lessors, who will include such amounts in their report of additions or betterments during the year.

The sub-headings of this table indicate by their titles what expenditures are to be included under each, except perhaps the following:

LAND.

Expenditures for real estate exclusively for railroad purposes, except right of way.

LAND DAMAGES.

Expenditures for right of way.

INTEREST AND DISCOUNT CHARGED TO CONSTRUCTION.

All interest and discount paid in obtaining funds for construction should be charged under this heading and not prorated through the various other items.

ROAD BUILT BY CONTRACT.

When contracts are made to construct either a portion of or the entire road for a specified amount, the charge should be made under this heading. State also how many miles of road the contract covers and whether or not equipment is included.

PURCHASE OF CONSTRUCTED ROAD.

When roads wholly or partially constructed are purchased for a specific sum, charge under this heading the amount paid, stating length, whether wholly or partially constructed, and whether or not equipment is included.

STATEMENT GIVING DESCRIPTION OF ADDITIONS OR BETTERMENTS DURING THE YEAR.

In giving this statement do not go too much into detail. If equipment, state number and cost of each class. If bridges or stations, state where located and cost of each, etc., etc. Where sundry small amounts are expended for general work include them in one item.

TABLE C.

INCOME ACCOUNT.

The results of the year for which the report is made will be shown as follows, viz.:

NET EARNINGS FROM OPERATION.

This source of income includes only gross earnings from actual operation of the entire road, whether owned, leased or both combined, less the expenses (excluding all taxes) incurred for such actual operation. 'Gross earnings and expenses will be shown in detail in table D.

ÍNCOME FROM OTHER SOURCES.

To include income from every other source than actual operation of the road, such as interest, dividends, rents of buildings or land and any other revenue accruing from property not used by the company for railroad purposes. Whatever such expenses may be incurred in securing such revenue or in repairs to the property should be charged against the revenue derived (and not to operating expenses), and either the net receipts entered under this heading or the total receipts credited here and the total expenses debited under "Deductions from Income," except payments for taxes which in all cases mush be charged to deductions from in come under the heading "Taxes other than above."

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GROSS INCOME FROM ALL SOURCES.

Includes the results of the above two headings combined.

DEDUCTIONS FROM INCOME.

Under this head include: Interest on funded debt due and that which has accrued but may not be due at the close of the fiscal year. Rents of leased lines given in detail. Taxes under three divisions, viz.: "On property used in operation of road." "On earnings and capital stock." "Other than the foregoing." When taxes are so assessed as to prevent these divisions all may be charged as "On property used in operation of road." Rentals of property not used in railroad purposes. Expenses chargeable against "income from other sources" (as referred to under that heading), but not deducted from revenue. Interest on floating debt. All other general expenses not clearly chargeable to operation of the road.

NET INCOME FROM OTHER SOURCES.

This is the result derived by deducting from amount of Gross income from all sources" the total of "Deductions from income."

PAYMENTS FROM NET INCOME.

Under this heading include dividends declared, whether paid not, stating rate and on what amount at par value, of preferred or common stock. If payments for improvements or permanent investmentes or for similer, items are made from "Net income" and charged to such accounts on general ledger no entry of them should be made here, as they will form a part of the balance remaining at credit of "Profit and loss." Any other payments made from "Net income" and charged to "Profit and loss" at close of the current year should be entered in detail.

SURPLUS OR DEFICIT FOR YEAR.

This is the "net income" less the payments made therefrom, and will show the balance carried to credit or debit of "profit and loss" on the business of the current year.

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SURPLUS OR DEFICIT OF PREVIOUS YEARS.

This will be the balance at credit or debit of profit and loss at the opening of the year for which the report is made, as shown on the report for the previous year, and should be combined with the surplus or deficit for the current year. Add to or deduct from this total any items (giving them in detail) which may have been carried direct to "profit and loss" during the year (such items to be only those which do not pertain specially to the business of the current year) and the balance will be the

TOTAL SURPLUS OR DEFICIT

Up to the close of the year for which the report is made, and should agree with the amount at credit or debit of "profit and loss" as shown on the general balance sheet—Table E.

TABLE D.

ANALYSIS OF GROSS AND OPERATING EXPENSES— EARNINGS.

The amounts actually earned within the current year are to be entered here, whether collected or not. For items not collected debits will appear against agents or others under "current assets" on general balance sheets.

FREIGHT.

"Through" to include earnings from all freight shipped to or from points outside of the State on a "through" rate, divided on percentages, and in which one or more foreign roads have an interest.

"Local" to include earnings from all other freight carried. The above earnings to be entered under each head, and the total of both extended into the column headed "Freight," as well as into that headed "Total."

PASSENGERS.

"Through" and "Local" earnings are to be governed by the same distinction as noted above for freight, and are to be entered under each head, extending the total of both into the column headed "Passenger," as well as into that headed "Total."

MAIL.

The total earnings from transportation of mail to be entered in column headed "Passenger," as well as that headed "Total."

EXPRESS.

The total earnings from transportation of express matter to be entered in column headed "Passenger," as well as in that headed "Total."

MISCELLANEOUS.

To include in detail any amounts, other than above, earned exclusively from operation of the road, such as receipts from telegraph, switching, news agency on trains or at stations, etc., etc. The proportion of such earnings to be credited to passenger and freight, where not actual, is to be made on basis of passenger and freight train mileage. The amount of the actual or apportioned earnings to be entered in the column to which it belongs (as designated by the heading thereof), and the total of both extended into the column headed "Total."

Note.—Receipts from sources such as the following are not to be included in earnings, but treated as noted:

SALE OF OLD MATERIAL.

To be credited under "operating expenses" to the accounts to which the new material is not replaced then the credit is to go to the account to which the original charge was made.

CAR SERVICE.

The balance of debit or credit of this account is to be included in operating expenses under the subdivision "Mileage of cars of other companies."

INTEREST AND RENTS.

The balance at credit of these accounts to be included under "Income from other sources."

OPERATING EXPENSES.

The cost of only the material actually used and labor performed within the fiscal year, whether paid or not, is to be entered here, the proportion of which to be charged to passenger and freight, when not actual, to be made on basis of passenger and freight train mileage. The amount of the actual or apportioned expenses to be entered in the column to which it belongs (as designated by the heading thereof), and the total of both extended into the column headed "Total."

The value of old material replaced by new should be credited to the repair account to which the new is charged, and if such old material is kept on hand the amount of its value should be debited to supply account, and when used again or sold that account should receive credit for the same.

These expenses are classed under four heads with their respective subdivisions, viz.: Maintenance of way and structures, Maintenance of equipment, Conducting transportation, General expenses.

MAINTENANCE OF WAY AND STRUCTURES.

REPAIRS OF TRACK.

To include cost of labor, ballast, ties, splices, spikes, switches, bolts, nuts, frogs, and all other material used and expense of distributing same; also repairs of track tools, hand-cars, etc.

Enter in the place designated the number of tons and cost of iron and steel rails laid within the year

REPAIRS OF ROAD-BED.

To include labor maintaining cuttings and embankments, repairing damages from water or other causes, cost of train service, repairs of tools, hand-cars, etc.

Note.— If preferred the "Repairs of track" and "Repairs of road-bed" can be combined under "Repairs of track and road-bed."

REPAIRS OF BRIDGES (INCLUDING CULVERTS AND CATTLE GUARDS).

To include cost of labor and material used in repairs or renewals. Expense of pile drivers and train services and repairs of tools, etc.

REPAIRS OF STATIONS, SHOPS, DOCKS, ETC.

To include cost of material used and expenses of distributing the same, and all labor performed in repairs of offices, stations, buildings and platforms, scales, freight depots, fuel and water stations, machine and car shops, engine houses, turntables, wharves, stock yards, station houses and the appurtenances properly belonging thereto, or any other buildings and fixtures used in operation of the road.

Repairs to buildings or other property not used for railroad purposes are to be charged against such property (as heretofore noted under "Income account"), and not to this account.

REPAIRS OF FENCES.

To include cost of material, with expenses of distributing same, and all labor performed in repairing or renewing fences, gates, road crossings and signs, and repair of tools, etc.

OTHER EXPENSES FOR MAINTENANCE OF WAY AND STRUCTURES.

To include wages of track and bridge watchmen and cost of supplies for section and watch houses, such as lanterns, oil, flags, etc., expense of clearing track or right of way of ice and snow, bushes, weeds, etc., and many miscellaneous expenses not chargeable specially under any of the foregoing headings.

MAINTENANCE OF EQUIPMENT. REPAIRS OF LOCOMOTIVES.

To include cost of material and labor in repairing, renewing or rebuilding, or of new locomotives purchased to make good any depreciation.

REPAIRS OF CARS.

To include cost of material and labor in repairing, renewing or rebuilding cars and appurtenances belonging thereto, or of new cars purchased to make good any depreciation.

REPAIRS OF MACHINERY AND TOOLS.

To include cost of material and labor in repairing or renewing machinery and tools in shops.

OTHER EXPENSES FOR MAINTENANCE OF EQUIPMENT.

To include shop and round-house expenses, such as cost of running machinery, heating, lighting, cleaning, wages of watchmen, etc., and any miscellaneous expenses not chargeable specially under any of the foregoing headings.

CONDUCTING TRANSPORTATION.

The cost of all train service and supplies other than that incurred for the transportation of passengers and freight, indicated below, is to be charged to the account for which the work is done.

WAGES OF CONDUCTORS AND MEN.

To include wages of conductors, baggagemen, brakemen, and others employed on passenger and freight trains.

WAGES OF ENGINEERS AND FIREMEN.

To include wages of locomotive engineers and firemen while engaged in running locomotives, hauling passenger and freight trains, and of men employed in wiping, firing up and dispatching locomotives at engine houses.

"Wages of engineers and firemen when employed in shops should be charged to the account upon which they are at work."

FUEL FOR LOCOMOTIVES.

To include the entire cost of all fuel consumed by locomotives used in passenger and freight service, and the wages of men employed and cost of supplies used at fuel stations.

OIL AND WASTE.

To include the cost of oil and waste for locomotives and cars used in passenger and freight service, and labor oiling.

WATER SUPPLY.

To include wages of men employed pumping and attending, and cost of supplies used at water stations; also cost of obtaining water when furnished by corporations or individuals.

OTHER TRAIN SUPPLIES OR EXPENSES.

To include all supplies for passenger and freight trains not embraced in the foregoing headings, such as fuel, lights, flags, lanterns, conductors' punches, headlight oil, etc., and any contingent expense not otherwise provided for.

WAGES OF STATION AGENTS AND CLERKS.

To include wages of freight and ticket agents and their clerks at stations and freight depots.

WAGES FOR LABOR AT STATIONS.

To include the cost of labor, handling freight, baggage, etc., at stations and freight depots.

STATION SUPPLIES.

To include all supplies used in conducting stations and freight depots (except stationery), such as fuel, lights, lanterns, flags, baggage checks, etc.

WAGES OF WATCHMEN, FLAGMEN AND SWITCHMEN.

To include wages of watchmen, flagmen and switchmen at stations and crossings, freight depots and yards.

OTHER EXPENSES FOR CONDUCTING TRANSPORTATION.

To include any miscellaneous or contingent expenses not embraced in the foregoing headings.

3

GENERAL EXPENSES.

SALARIES OF GENERAL OFFICERS AND CLERKS.

To include salaries of general officers, heads of departments (except legal department), and division superintendents, with their respective assistants, clerks and attendants.

GENERAL OFFICE EXPENSES AND SUPPLIES.

To include traveling expenses of officers and clerks, pay car expenses, postage, fuel, lights, and any other expenses incident to the general offices not otherwise provided for.

STATIONERY AND PRINTING.

To include the cost of all stationery, blank books and forms, tickets, employees' time tables, tariffs, and all else of a similar description not otherwise provided for.

OUTSIDE AGENCIES AND ADVERTISING.

To include salaries and expenses of traveling agents and solicitors, and of agents located off the line of the company, also cost of all advertisements, public time cards, posters, bulletins, cards and similar matter, together with the expense of distributing and displaying the same.

LEGAL EXPENSES.

To include salaries and fees of attorneys, and all legal expenses of every kind.

LOSS AND DAMAGE OF FREIGHT AND BAGGAGE.

To include payments made for loss or damage of freight, live stock, baggage, parcels, or other property intrusted to the company for transportation, and any expenses (except legal) incident thereto.

DAMAGE TO CATTLE AND PROPERTY.

To include payments made for damage to or destruction of property other than that intrusted to the company for transportation,

also for live stock killed or injured by locomotives or trains on line of road. The salaries and expenses of persons employed in adjusting this class of claims and any other expenses (except legal) incident thereto should be charged to this account.

INJURIES TO PERSONS.

To include payments made for damages on account of persons killed or injured, also expenses for board, medical attendance, undertakers, witness fees, and any other expenses (except legal) incident thereto. The salaries and expenses of company surgeons and of employes when engaged in such matters, as witnesses or otherwise, and of any persons employed in adjusting this class of claims should be charged to this account.

TELEGRAPH MAINTENANCE AND OPERATION.

To include the cost of material and labor used in maintaining and repairing telegraph lines owned or leased, including appurtenances required at offices, rents paid for leased lines, salaries of superintendents, operators, messengers and train despatchers, and any other contingent expense incident thereto.

MILEAGE OF CARS OF OTHER COMPANIES.

To include only the balance remaining at debit or credit of this account for interchange of rolling-stock with other companies or individuals. As the balance appears at the close of the year it is to be debited or credited, as the case may be, under this heading.

OTHER GENERAL EXPENSES.

To include any contingent expenses incurred exclusively in operation, maintenance or management of the road not otherwise provided for.

TABLE E.

GENERAL BALANCE SHEET.

This is to be a transcript of the general ledger in a condensed form, and should show as "Assets" or "Liabilities" respectively the debit or credit balances of the various accounts as they appear at the close of the fiscal year.

ASSETS.

COST OF ROAD—COST OF EQUIPMENT.

These accounts are to embrace respectively the cost of original construction and equipment, together with any additions or betterments made from time to time, and charged thereto; also such porion of expenditures for repairs or renewals which may be incurred beyond what is necessary to make good any depreciation. If real estate used for railroad purposes, or expenditures made for improvements are kept under separate headings on the ledger, include such under these headings on the balance sheet.

OTHER PERMANENT INVESTMENTS.

This is to embrace under definite headings, such as "Stock of other companies," "Bonds of other companies," etc., investments which may be made in such securities or in real estate, or other property not used for railroad purposes. If any of such securities or property is sold the result of such sale is to be carried to "Profit and loss," so that the balance (if any) which may appear at the debit of these accounts on the general ledger will show the actual cost of the securities or other property on hand, and are to be entered under this heading.

CASH ON HAND.

Under this heading show the total amount of cash in hands of treasurer and in bank, or other depositaries, subject to draft.

BILLS RECEIVABLE.

When obligations are given the company by debtors, close such debtor's account into bills receivable account, and when the obligation is paid credit latter account. The balance at debit of bills receivable (if any) should represent the amount of obligations on hand, and is to be entered under this heading.

DUE BY AGENTS.

An account should be kept on the general ledger showing total amounts due by agents and conductors on account of traffic, and

the balance at debit of that account is to be entered under this heading. Necessary sub-books or records should be kept to show amounts due from each agent and conductors.

OPEN ACCOUNTS.

This heading is to embrace the total of all debit balances of accounts with other companies and individuals not otherwise provided for. The payments and receipts on account of coupon tickets and car mileage can be entered up to one account for each on the general ledger, and the sub-ledgers kept to show the transactions with each company or individual.

MATERIALS AND SUPPLIES.

When purchased they should not be charged to operating or construction accounts, but to an account kept for that purpose, and when used credit that account and debit the various accounts for which they are used.

When new material is substituted for old the latter, if not disposed of at once, should be debited to this account and credited to the account to which the former is charged, and the balance remaining at the debit of this account from time to time will represent the value of the suppplies on hand. At the close of each year, or oftener if preferred, the supplies on hand should be inventoried, and whatever discrepancy may appear between the total of such inventory and the debit balance of the ledger account should be prorated between the various accounts to which supplies have been charged during the year, and the balance then appearing at debit of this account will be the proper amount to enter under this heading.

SINKING FUND.

Any payments made under a provision of this nature should be charged to an account kept for that purpose, and whatever amount stands at debit of such account is to appear under this heading.

SUNDRIES

This heading is to embrace all debit balances of general ledger accounts not otherwise provided for.

PROFIT AND LOSS (DEFICIENCY).

All accounts pertaining to income should be closed into "Profit and loss" at the end of each year by two entries, one showing income fom all sources, and the other showing charges against such income, or if preferred, the various accounts pertaining to income can be closed into one account and the balance of that account carried to "Profit and loss" each year.

Transactions requiring to be closed by profit and loss and not pertaining specifically to the business of the current year should not be included in the entries made to close the business of each year, but should be carried direct to "Profit and Loss."

If after making all requisite entries the account shows a debit balance it should appear under the heading and must agree with the amount of the "Total Deficit," as shown on Table C. (Income Account).

LIABILITIES.

CAPITAL STOCK-FUNDED DEBT.

These accounts on the general ledger are to show respectively the par value of capital stock and mortgage bonds outstanding, and the balance at credit of the same is to appear under these headings, and must agree with the totals outstanding, as shown on Table A. (Capital stock and Funded Debt).

INTEREST ON FUNDED DEBT, DUE AND ACCRUED.

Separate accounts should be kept showing the interest due and accrued on each denomination of bonds outstanding; and by subheadings in such accounts each series of coupons can be shown separately. To these accounts should be credited monthly, whether due or not, one-twelfth of the actual interest on the bonds outstanding, debiting the same to an account called "Accrued Interest on Funded Debt," and at the end of each year close the latter account, with the other income accounts, into "Profit and Loss." When the interest is paid debit such payment to the denomination and series to which it belongs.

The amount remaining at credit of these several accounts combined will show the amount due and accrued, and is to appear under this heading.

DIVIDENDS UNPAID

When dividends are declared they should be credited to an account called "Dividends Payable," with sub-headings designating each dividend by numbers, and debited to an account called "Dividends Declared," which latter account should be closed at the end of each year, with the other income accounts, into "Profit and Loss." Payments made on account of dividends charge to "Dividends Payable" under sub-heading to which it may belong.

The amount remaining at credit of "Dividends Payable," under the sub-headings combined, will represent the amount unpaid, and is to appear under this heading.

AUDITED VOUCHERS AND PAY-ROLLS.

When supplies are purchased, or other obligations incurred, vouchers should be made in favor of the creditor, and when properly approved for payment entered into a book provided for that purpose, stating on what account the liability is incurred; and when closing each month's accounts the totals of these entries should be transferred to the general ledger, debiting the various accounts and crediting audited voucher account. When these youchers are paid they will appear in the treasurer's accounts as a debit against audited voucher account. Thus when supplies are purchased they will be charged in this way to supply account, whether paid for or not, and from that account the debits will be made against operating or construction accounts for the amounts acually used within the month. Pay-rolls will be debited each month to the various accounts for which the labor was performed, and credited to wages account, and when paid the amount so paid will appear in the treasurer's accounts as a debit against the latter account.

The credit balance of these two accounts combined is to be entered under this heading.

Where separate accounts are kept with departments the debits of the vouchers and pay-rolls may be made against the departments from which they emanate, and by them, in their monthly returns to the accounting officer, distributed to the various operating, construction, or other accounts for which the expenditure was incurred.

OPEN ACCOUNTS.

This heading is to embrace the total of all credit balances of accounts with other companies and individuals not otherwise provided for.

LOANS AND BILLS PAYABLE.

This heading is to embrace the credit balance of these accounts combined. Such accounts are to include, respectively, all moneys borrowed or obligations issued by the company for indebtedness of any nature. When such obligations are issued close the creditors account into bills payable account, and when paid debit the payment to latter account.

SUNDRIES.

This heading is to embrace all credit balances of general ledger accounts not otherwise provided for.

PROFIT AND LOSS (SURPLUS).

See profit and loss under "Assets," and if credit balance is shown it is to appear under this heading, and must agree with the amount of the total surplus as shown on Table C. (Income Account).

TABLE F.

TRAFFIC AND MILEAGE STATISTICS.

TABLE G.

DESTRUCTION OF ROAD AND EQUIPMENT.

TABLE H.

MISCELLANEOUS STATISTICS.

In above three tables and under all succeeding headings fill in carefully the information required.

Lessor (steam) railroad companies will fill in such tables of the form for annual reports as are designated below.

HISTORY OF ORGANIZATION, ETC.

Observe explanations as given owners and lessees.

TABLE A.

CAPITAL STOCK AND FUNDED DEBT.

Observe explanations as given owners and lessees.

TABLE B.

COST OF ROAD AND EQUIPMENT.

Include each year under this heading in addition to any expenditures your company incurs, the expenditures made by the lessee company for which your company is to reimburse it. (The lessee company will not include such expenditures in its returns, but report the same in detail to the lessor company immediately after the close of each year.) Then observe so far as applicable the explanations given owners and lessees for filling this table.

TABLE C.

INCOME ACCOUNT.

Having no income from operation, enter first under "Income from Other Sources," the rental received from lessee, and then observe so far as applicable the explanations given owners and tessees for filling this table.

TABLE E.

GENERAL BALANCE SHEET.

Observe so far as applicable explanations given owners and lessees.

TABLE G.

DESCRIPTION OF ROAD AND EQUIPMENT.

TABLE H.

MISCELLANEOUS STATISTICS.

In tables G. and H. fill in such items as do not specially pertain to the operation of the road by the lessee. Under headings succeeding table H. fill in carefully the information required.

Companies whose railroads (steam) are projected, or partially or wholly constructed, but not in operation, will fill in such tables of the form for annual reports as are designated below, and, so far as applicable, observe explanations given under the respective tables and sub-headings to owners and lessees of roads in operation.

HISTORY OF ORGANIZATION.

TABLE A.

CAPITAL STOCK AND FUNDED DEBT.

TABLE B.

COST OF ROAD AND EQUIPMENT.

TABLE E.

GENERAL BALANCE SHEET.

TABLE G.

DESCRIPTION OF ROAD AND EQUIPMENT.

TABLE H.

MISCELLANEOUS STATISTICS.

Under headings succeeding table H, fill in carefully the information required.

Companies operating horse railroads as owners or lessees, or both combined, will note the following explanations in filling in the form for annual reports to the board:

HISTORY OF ORGANIZATION, CONSTRUCTION, LEASING, ETC.

Observe explanations to companies operating steam roads.

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TABLE A.

CAPITAL STOCK AND FUNDED DEBT.

Observe explanations to companies operating steam roads.

TABLE B.

COST OF ROAD AND EQUIPMENT.

Road-bed superstructure and rails—to embrace cost of labor and material including paving, etc.

RIGHT OF WAY.

To include cost of obtaining franchise and any other expense incident to securing location, etc.

REAL ESTATE.

To include cost of all real estate used for railroad purposes exclusively. All not so used should be charged as an investment to an account kept for that purpose.

BUILDING AND FIXTURES.

To include cost of all buildings, and fixtures appertaining thereto, used for railroad purposes exclusively, such as stables, car houses, offices, machinery and tools, etc., etc. All not so used should be charged as an investment to an account kept for that purpose.

For other headings in this table and for general instructions as to treatment of it, observe explanations given companies operating steam roads.

TABLE C.

INCOME ACCOUNT.

Observe explanations to companies operating steam roads.

TABLE D.

Analysis of gross earnings and operating expenses.

EARNINGS.

The amounts actually earned within the fiscal year are to be entered here whether collected or not. For items not collected debits will appear against agents or others under "Cash Assets" on general balance sheet.

In addition to receipts from transportation of passengers this heading is to embrace any other amounts earned exclusively from operation of the road. Receipts from the sale of worn out horses and old material should go to the credit of the account to which the new is charged, and receipts from interest, rents, etc., should go to the credit of "Income from other sources." These and similar items are not earnings and should not be treated as such.

OPERATING EXPENSES.

The cost of only the material actually used and labor performed, within the current year, whether paid for or not is to be entered under this heading. The value of all old material replaced by new should be credited to the repair account to which the new is charged, and if such old material is kept on hand the amount of its value should be debited to supply account, and when used again or sold that account should receive credit for the same.

REPAIRS OF ROADBED AND TRACK.

To embrace cost of labor in maintaining, repairing or renewing, including paving, etc., and cost of all material used for the same, including rails.

REPAIRS OF BUILDING AND FIXTURES.

To include cost of labor and material used in repairs of stables, car-houses, offices, etc., and the appurtenances properly belonging thereto, or any other buildings or fixtures used in operation of the road. Repairs to buildings or other property not used for railroad purposes should be charged against such property (as noted under "Income Account"), and not to this account.

REPAIRS OF CARS AND OTHER VEHICLES.

To include cost of material and labor in repairing, renewing or rebuilding cars of other vehicles and appurtenances belonging thereto or of new cars or other vehicles purchased to make good any depreciation.

REPAIRS OF HARNESS AND STABLE ACCOUNT.

To include cost of material and labor in repairing or renewing or of new harness or stable equipment purchased to make good any depreciation.

HORSESHOEING:

To include cost of material and labor.

RENEWALS OF HORSES AND MULES.

To include cost of horses and mules purchased to replace those worn out.

PROVENDER (including expense of grinding).

To include cost of supply, and labor preparing for use.

SALARIES OF GENERAL OFFICERS AND CLERKS.

To include salaries of general officers and superintendents and their respective assistants and clerks.

WAGES OF CONDUCTORS AND DRIVERS AND ENGINEERS ON DUMMY CARS, AND WAGES OF WATCHMAN, STARTERS, SWITCHMEN, ROADMEN, HOSTLERS, ETC.

To include wages paid, combined as above.

LIGHT AND FUEL.

To include cost of same.

WATER TAX.

To include water tax levied by cities or corporations, or any other expense incurred for obtaining water supply for railroad purposes.

DAMAGES TO PERSONS AND PROPERTY.

To include payments made for damage to, or destruction of property or of persons killed or injured, also expenses for medical attendance (if any), or any other expenses (except legal) incident thereto.

LEGAL EXPENSES.

To include salaries and fees of attorneys and all legal expenses of every kind.

ADVERTISING, PRINTING AND OFFICE EXPENSES.

To include cost of advertising, printing blanks, stationery, blank books, etc., and all expenses incident to the general office.

INSURANCE.

To include cost of insurance on any property used for railroad purposes. All other insurance should be charged against the property insured.

REMOVAL OF SNOW AND ICE.

To include cost of labor and any other expense incident therefo.

CONTINGENCIES.

To include any miscellaneous expenses incurred exclusively in operation of the road, not otherwise provided for.

TABLE E.

GENERAL BALANCE SHEET.

Observe explanations given under similar headings to companies operating steam roads.

TABLE F.

CHARACTERISTICS OF ROAD EQUIPMENT, ETC.

In above table and under all succeeding headings, fill in carefully the information required.

Lessor (horse) railroad companies will fill in such tables of the form for annual reports as are designated below.

HISTORY OF ORGANIZATION, ETC.

Observe explanations as given owners and lessees.

TABLE A.

CAPITAL STOCK AND FUNDED DEBT.

Observe explanations as given owners and lessees.

TABLE B.

COST OF ROAD AND EQUIPMENT.

Include each year under this heading in addition to any expenditure your company incurs, the expenditures made by the lessor company for which your company is to reimburse it. (The lessee company will not include such expenditures in its returns, but report the same in detail to the lessor company immediately after the close of each year). Then follow, so far as applicable, the explanations as given owners and lessees for filling this table.

TABLE C.

INCOME ACCOUNT.

Having no income from operation, enter first under "Income from other sources," the rental received from lessees and then follow, as far as applicable, the explanations given owners and lessees for filling this table.

TABLE E.

GENERAL BALANCE SHEET.

Observe so far as applicable the explanations as given owners and lessees.

TABLE F.

CHARACTERISTICS OF ROAD EQUIPMENT.

Fill in such items as do not specially pertain to the operation of the road by the lessee.

Note.—Under heading "Officers of the Company," and those succeeding it, fill in carefully the information required.

Companies whose railroads (horse) are projected, or partially or wholly constructed, but not in operation, will fill in such tables of the form for annual reports as are designated below, and, so far as applicable, will observe explanations as given under the respective tables and sub-headings to owners and lessees of roads in operation.

HISTORY OF ORGANIZATION, ETC. TABLE A.

CAPITAL STOCK AND FUNDED DEBT.

TABLE B.

COST OF ROAD AND EQUIPMENT.

TABLE E.

GENERAL BALANCE SHEET.

TABLE F.

CHARACTERISTICS OF ROAD AND EQUIPMENT.

Note.— Under the heading "Officers of the Company," and those succeeding it, fill in carefully the information required.

INVESTIGATION AND REPORT OF MR. H. M. THOMPSON, ACCOUNTANT, BY ORDER OF THE BOARD OF RAIL-ROAD COMMISSIONERS OF THE STATE OF NEW YORK, 1895.

ALBANY, N. Y., April 30, 1895.

To the Honorable Board of Railroad Commissioners of the State of New York:

Gentlemen.—In further conformity with your resolution of January 21, 1895, directing me to examine the accounts of certain horse railroad companies in New York and Brooklyn cities, to ascertain the cost of road and equipment, financial condition, etc., I beg to present the following report:

BROOKLYN CITY RAILROAD COMPANY.

This company was chartered December 17, 1853, with a capital of \$2,000,000 and commenced operating a part of its lines in July, 1854. It has been constantly constructing and equipping new rodas, uneil on September 30, 1884, it had in active operation 44 miles of double track. About twenty-two miles of the road originally laid with iron rail has been relaid with steel, and the ties originally laid seven feet apart have been renewed at four feet apart, and all new work since that rebuilding has been done in the same manner. The entire cost of rebuilding was charged against earnings. No part of the increased cost incurred by bettering the road appears in construction. The books of account and record are on hand from date of incorporation, and have been so kept as to show clearly all transactions.

From these books I make the following analysis of the charges to cost of road and equipment:

CONSTRUCTION.

Salaries, engineering, etc	\$11,191	85
Labor	169,208	15
Spikes, knees, frogs, plates, curves, castings, etc	107,662	5 8
Ties and timber	116,711	90
Rails	462,041	0.7
Grading, sewerage, bridging, paving, etc	53,096	7 8
Flatbush Turnpike Co., right of way	3,000	00
Brooklyn & Jamaica Road Co., right of way	3,000	00
Union Ferry Co., right of way	5,000	00
Quinby, Boerum and Browne, and grant in Williams-		
burg	8,500	00
Paid property owners for changing route of Court		
street and Greenwood line	10,500	00
Paid for stock and bonds of Ridgewood Railroad Co.		
(to acquire property)	41,604	50
New track, Magnolia street and Howard avenue, ex-		
tension Halsey street, Myrtle and Gates avenues;		
extensions through Powers street (now Third ave-		

'nue); reconstruction of Kent avenue tracks; exten-
sion of Third avenue line from Wyckoff street to
Hamilton avenue, and also Putnam avenue line;
also Flushing avenue line, from North Second
street to Van Cott avenue; Third avenue car-
tracks. Additional tracks, Halsey street; East
New York car-house, Fulton ferry Court street
and Ridgewood park extension, 8 57-100 miles
double track, etc., \$186,644.45 less track aban-
doned at Fort Hamilton, \$2,500, making 184,144 45
\$1,175,621 28
Transfer from operating expenses to construction,
June, 1855
\$1,189,258 0 7
Less credits of sundry items 6,678 26
Grand total
REAL ESTATE.
For purchase of real estate, and construction of the
following buildings: East New York depot; Bed-
ford depot; Putnam avenue depot; Gates avenue
depots, two; Greenwood depot; Flatbush depots,
two; Flushing avenue depot; Myrtle avenue depot;
Greenpoint depot; office building, 10 Fulton street;
· mill, pump house, motor house, two horse stables,
repair shops, blacksmith shops
EQUIPMENT.
For purchase of the following equipment:
Horses, 3,045 at \$150 \$456,750 00
Cars, 761 at \$850
Dummies, 15 at \$4,000
Harness, 1,600 sets; 1,500 at \$20, 100 at \$10 31,000 00
Sweepers, 11 at \$1,000
Plows, 19 at \$500

1770		[Assembly,	
Registers and ringing devices, 692 at \$35		\$24,220	00
Wagons and trucks, carts, etc		13,120	00
Stoves and boxes in cars, at \$25		12,500	00
Stable equipment, blankets, etc		717	65
	- \$	1,265,657	65

Total cost of road and equipment to September 30, 1884, as shown on books of the company, and as reported to Board of Railroad Commissioners. \$3,558,166 30

The item for right of way charged under construction, were paid at various times as the roads were extended under order of the board of directors, as shown by the minutes.

The payment of stock and bonds of the Ridgewood Railroad Company, charged under construction, was made to acquire the charter of that company, and a portion of its route is now one of the most important lines of this company. The entire issue of bonds, \$20,000, and \$119,900 out of \$164,000 of capital stock were purchased, making average cost of same about 30 per cent. item of transfer from operating expenses, \$13,636.79, was made in June, 1855, about eleven months after the road commenced operating. The charges were originally made to an account called "Contingent," and \$6,170.30 of the total amount of transfer was charged to this account before the company commenced to operate its road, and in looking through the various charges I found about \$1,000 charged between July, 1854, (date operation commenced), and June, 1855, (date of transfer), which upon their face were properly chargeable to construction and equipment, such as furniture, safe, etc. Legal expenses were also charged for about \$6,000, which may have been included in this term of transfer, but as there was no detailed statement on file of this particular amount, no positive identification could be made. This company has always charged new work, since original construction and equipment, to operating expenses, and each year before making annual report has, from reports made by superintendents of the various departments, presented to the board of directors a statement of such new work, and by resolution of the board duly recorded on the minutes the cost has been carried to the debit of cost of road and equipment. The item of \$13,636.79, above referred to, was transferred so soon after operation commenced, that no official now connected with the company has any knowledge of it, and no detail of it appears upon the records.

As noted in the opening of this report the charges for betterments in relaying track, etc., were all charged to operating expenses. From vouchers on file the steel rail used from 1876 to 1884 for this purpose cost an average of 20 per cent. more than iron rail. Calculating 189 tons per mile of double track and iron rail at an average of \$42 per ton, the cost would have been for iron, \$7,938 per mile of double track, or for the 22 miles relaid, \$174,636.

Twenty per cent. additional for cost of steel would be\$34,927	20
And for increase in ties, from 755 to 1,320 per mile, and	
corresponding increase in knees and joints 8,000	00
Payments made city for assessment, paving with block	
stone	00
Cost of paving with block stone (over cost of cobble	
stone) of grades and curves over entire road forty-	
four miles	00
Cost of 50 automatic switches over cost of ordinary	
switch, the former costing \$350 each, and the latter	
\$100 each, say \$250 each	00
-	
Total cost of track betterments not charged to cost	
of road\$95,427	20

The above items of betterments as furnished me by the officials of the company, would have been a fair charge against "Cost," and I particularize it here as an indication of the policy of the company for years past as I see by various charges to surplus account for losses on property and charges to expenses for betterments, that the cost of the property should not be unduly increased. The

officials inform me that the cost of building the road of this company as now done, is \$25,000 per mile of double track.

The real estate account comprises cost of property and construction of buildings as enumerated. The cost of the various buildings has not been kept separately, as material and labor was charged in aggregate sums and used as required. The equipment account up to 1866 was credited each year with depreciation on stock, as well as sale of horses, etc., but since that date this practice has been discontinued and the account showed a debit on September 30, 1884, of \$1,265,657.65, and ignoring all entries of changes in value, I have taken the inventory as it stood at that date and placed upon each item an average cost, as paid by this and other companies, leaving the amount of \$717.65 as cost of the entire stable equipment, etc., etc., which, of course, is very small.

CAPITAL STOCK.

1854 to 1858, subscriptions at par in cash\$	000,000	00
October 11, 1866, by resolution of board of directors		
stock was increased	500,000	00
Charged against surplus and divided pro rata among		
the stockholders	500,000	00
August, 1872, by resolution of board, etc	250,000	00
August, 1872, to May, 1873, subscriptions at par in		
cash	250,000	00
_	-,	
Total outstanding September 30, 1884, as per re-		
port to Railroad Commissioners\$	2,000,000	00

BONDS.

November, 1860, to January, 1862, first mortgage bonds issued at par, \$300,000 and paid off in May, 1881.

January to April, 1882, first mortgage bonds issued at 102, \$800,000, which were outstanding September 30, 1884, as reported to Railroad Commissioners.

FLOATING DEBT.

Loans outstanding September 30, 1884, as reported to		
Railroad Commissioners	\$500,000	00
Surplus September 30, 1884, as reported to Railroad		
Commissioners	364,277	30
DIVIDENDS.		
1855 to 1857, eight per cent. per annum on amount as		
subscribed	\$184,830	20
1858 to 1862, 8 per cent. per annum on \$1,000,000	•	
1858 to 1862, 8 per cent. per annum on \$1,000,000	400,000	00
1863, 9 per cent. per anum on \$1,000,000 00	90,000	00
1864, $8\frac{1}{2}$ per cent. per annum on \$1,000,000	85,000	00
May, 1865, 10 per cent. per annum one-quarter on		
\$1,000,000	25,000	00
Part of 1865 and 1866, 12 per cent. per annum on		
\$1 ,000,000	150,000	00
November, 1866, to April, 1872, 12 per cent. per an-		
num on \$1,500,000	1,035,000	00
July, 1872, to April, 1873, 12 per cent. per annum on	,	
outstanding as subscribed	269,279	70
July, 1873, to February, 1875, per annum on	·	
\$2,000,000	490,000	00
April, 1875, to January, 1876, 14 per cent. per annum	•	
on \$2,000,000	240,000	00
1876 to 1884, 14 per cent. per annum on \$2,000,000	2,380,000	00
Total dividends paid up to September 30, 1884\$	5,349,109	90

This company operates more mileage than any other horse rail-road company in the State, while its earnings and expenses do not bear the same proportion to its mileage as does the majority of the other large companies. It could abandon some lines and thereby increase its income. As shown by its expense accounts, the road and equipment are thoroughly kept up. Its accounting department is most admirably conducted in all its details; so com-

pactly are its accounts arranged, that but one ledger, two journals and six day books have been in use since the organization of the company, now over 30 years, and yet so clearly and carefully are the distributions made that the results of the operation and all its financial transactions are easily obtainable at any date. In my investigation I have been afforded every facility, and all explanations and assistance required has been cheerfully furnished by the officials of the company.

All of which is respectfully submitted.

(Signed).

H. M. THOMPSON,

Accountant.

This indenture, made the 14th day of February, 1893, between the Brooklyn City Railroad Company, a domestic corporation, duly incorporated under the laws of the State of New York, party of the first part, and hereinafter designated as the lessor, and the Brooklyn Heights Railroad Company, a domestic corporation, also duly organized under the laws of the State of New York, party of the second part, and hereinafter designated as the lessee;

Whereas, The parties hereto, the lessor and the lessee, are street surface railroad corporations, duly organized and existing under the laws of the State of New York, and are each engaged in operating street surface railroads in the city of Brooklyn, county of Kings, and State of New York;

Nok, therefore, this indenture witnesseth: That the lessor and the lessee, for and in consideration of the sum of \$1, each to the other in hand paid, the receipt whereof is hereby acknowledged, and for and in consideration of the covenants and agreements hereinafter contained on the part of each to be kept and performed, and other valuable considerations, have agreed as follows:

1.

The lessor hereby grants, demises and leases unto the lessee and its successors all and singular the railroad and railroads owned, constructed or operated by the lessor in the city of Brooklyn, in the county of Kings, or in the county of Queens, in the State of New York.

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Beginning at a point at or near Fulton ferry; thence through, along, over and upon Fulton street to Alabama avenue; thence through, along, over and upon Alabama avenue to Atlantic avenue.

From the intersection of Sands and Fulton streets, through, along, over and upon Sands street to Navy street; thence through, along, over and upon Navy street to Flushing avenue, also from the intersection of Hudson avenue through, along, over and upon Hudson avenue to Flushing avenue; thence through, along, over and upon Flushing avenue to Metropolitan avenue in the town of Newtown; also from the intersection of Flushing avenue, Broadway and Graham avenue; thence through, along, over and upon Graham avenue to Van Cott avenue; thence through, along, over and upon Van Cott avenue to Manhattan avenue; thence through, along, over and upon Manhattan avenue to the Newtown creek bridge.

Beginning at a point at or near the Newtown creek bridge and Vernon avenue in Long Island City; thence through, along, over and upon Vernon avenue to Borden avenue; thence through, along, over and upon Borden avenue to Ferry street; also from the intersection of Box street and Manhattan avenue; thence through, along, over and upon Box street to Oakland street; thence through, along, over and upon Oakland street to Van Cott avenue; thence through, along, over and upon Van Cott avenue to Graham avenue; also from the intersection of Union avenue and Van Cott avenue; thence through, along, over and upon Union avenue to Broadway; thence through, along, over and upon Broadway to Throop avenue; thence through, along, over and upon Throop avenue to Park avenue.

Beginning at the intersection of Driggs street and Broadway; thence through, along, over and upon Driggs street to Van Cott avenue; thence through, along, over and upon Van Cott avenue to Manhattan avenue; also from the intersection of Bedford avenue to Van Cott avenue; thence through, along, over and upon Van Cott avenue to Driggs street.

Beginning at a point at or near Erie Basin; thence through, along, over and upon Richards street to Woodhull street; thence

through, along, over and upon Woodhull street to Columbia street; also from a point at or near South ferry; thence through, along, over and upon Atlantic avenue to Court street; also from the intersection of Court and Joralemon streets; thence through, along, over and upon Joralemon street to Willoughby street; thence through, along, over and upon Willoughby street to Raymond street; thence through, along, over and upon Raymond street to Park avenue; also from the intersection of Navy and Willoughby streets; thence through, along, over and upon Navy street to Park avenue; thence through, along, over and upon Park avenue to Washington avenue.

Beginning at the foot of Greenpoint avenue; thence through, along, over and upon Greenpoint avenue to Calvary cemetery, in the town of Newtown.

Beginning at the intersection of Lee avenue and Gwinnett street; thence through, along, over and upon Gwinnett street to Lorimer street; thence through, along, over and upon Lorimer street to Nassau avenue; 'thence through, along, over and upon Nassau avenue to Manhattan avenue; also from the intersection of Manhattan avenue to Meserole avenue; thence through, along, over and upon Meserole avenue to Franklin street.

Beginning at the intersection of Broadway and Driggs street; thence through, along, over and upon Driggs street to Division avenue; thence through, along, over and upon Division avenue to Lee avenue; thence through, along, over and upon Lee avenue to Nostrand avenue; thence through, along, over and upon Nostrand avenue to Malbone street (in the town of Flatbush); thence through, along, over and upon Malbone street to Flatbush avenue; also from the intersection of Malbone street (in the town of Flatbush) and Nostrand avenue; thence through, along, over and upon Malbone street to Clove road; thence through, along, over and upon Clove road to Clarkson street; thence through, along, over and upon Clarkson street to East Thirty-seventh avenue; thence through, along, over and upon Clarkson, over and upon East Thirty-seventh avenue to Canarsie lane.

Beginning at a point at or near the foot of Grand street; thence through, along, over and upon Grand street to Newtown creek; thence through, along, over and upon Grand street (in the town of Newtown) to the Flushing turnpike; thence upon and along said turnpike to the station of the North Shore branch of the Long Island Railroad.

Beginning at the intersection of Grand, and Humboldt streets; thence through, along, over and upon Humboldt street to Meeker avenue; thence through, along, over and upon Meeker avenue to Newtown creek.

Beginning at the intersection of Myrtle avenue and Fulton street; thence through, along, over and upon Myrtle avenue to Ridgewood Park, Queens county.

Beginning at the intersection of Greene avenue and Fulton street; thence through, along, over and upon Greene avenue to Franklin avenue; thence through, along, over and upon Franklin avenue to Gates avenue; thence through, along, over and upon Gates avenue to Myrtle avenue.

Beginning at the intersection of Myrtle avenue and Wyckoff avenue; thence through, along, over and upon Wyckoff avenue to Willow street, in the village of Evergreens, town of Newtown; thence through, along, over and upon said Willow street to Ridgewood park, town of Newtown.

Beginning at the intersection of Putnam avenue and Fulton street; thence through, along, over and upon Putnam avenue to Nostrand avenue.

Beginning at the intersection of Nostrand avenue and Halsey street; thence through, along, over and upon Halsey street to Broadway.

Beginning at a point at or near the foot of Broadway; thence through, along, over and upon Broadway to Roebling street; thence through, along, over and upon Roebling street to Division avenue; thence through, along, over and upon Division avenue to Harrison avenue; thence through, along, over and upon Harrison avenue to Tompkins avenue; thence through, along, over and upon Tompkins avenue to Fulton street.

Beginning at the intersection of Kingston avenue and Fulton street; thence through, along, over and upon Kingston avenue to Butler street.

Beginning at the intersection of Broadway and Bedford avenue; thence through, along, over and upon Bedford avenue to South Fourth street; thence through, along, over and upon South Fourth street to Meserole street; thence through, along, over and upon Meserole street to Bushwick avenue; thence through, along, over and upon Bushwick avenue to Myrtle avenue.

Beginning at the intersection of Flushing and Knickerbocker avenues; thence through, along, over and upon Knickerbocker avenue to Myrtle avenue.

Beginning at the intersection of Cypress and Myrtle avenues; thence through, along, over and upon Myrtle avenue to Jamica turnpike.

Beginning at the intersection of Flatbush avenue and Fulton street; thence through, along, over and upon Flatbush avenue its entire length to a point two hundred feet southeast of Vernon avenue, in the town of Flatbush; thence through and along Flatbush avenue to King's highway.

Beginning at the intersection of Flatbush and Third avenues; thence through, along, over and upon Third avenue its entire length in the city of Brooklyn and the town of New Utrecht to Fort Hamilton, in the town of New Utrecht.

Beginning at the intersection of Court and Fulton streets; thence through, along, over and upon Court street to Hamilton avenue.

Beginning at a point at or near Hamilton ferry; thence through, along, over and upon Hamilton avenue to Third avenue

Beginning at the intersection of Twenty-fourth street and Third avenue; thence through, along, over and upon Twenty-fourth street to Fifth avenue; thence through, along, over and upon Fifth avenue to Twenty-fifth street; thence through, along, over and upon Twenty-fifth street to Third avenue.

Beginning at a point at or near Fulton ferry; thence through, along, over and upon Furman street to Atlantic avenue; thence

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through, along, over and upon Atlantic avenue to Columbia street; thence through, along, over and upon Columbia street to Sackett street; thence through, along, over and upon Sackett street to Hamilton ferry.

Beginning at the intersection of Classon and Myrtle avenues; thence through, along, over and upon Classon avenue to Kent avenue; thence through, along, over and upon Kent avenue to Franklin street; thence through, along, over and upon Franklin street to Commercial street; thence through, along, over and upon Commercial street to Manhattan avenue; also from the intersection of Myrtle and Washington avenues; thence through, along, over and upon Washington avenue to Kent avenue.

Beginning at the intersection of Palmetto street and Myrtle avenue; thence through, along, over and upon private property to Myrtle avenue; also from the intersection of Myrtle and Cypress avenues; thence through, along, over and upon Cypress avenue to the westerly entrance to Cypress Hills cemetery; also from the intersection of Palmetto street and Myrtle avenue; thence through, along, over and upon private property to Metropolitan avenue, in the town of Newtown.

Beginning at the intersection of Sixtieth street and Second avenue; thence through, along, over and upon Second avenue to Sixty-fifth street; thence through, along, over and upon Sixty-fifth street to Third avenue.

Beginning at the intersection of Third and Bay Ridge avenues, in the town of New Utrecht; thence through, along, over and upon Bay Ridge avenue to Thirteenth avenue; thence through, along, over and upon Thirteenth avenue to Eighty-sixth street; thence avenue; thence through, along, over and upon Twenty-fifth avenue; thence through, along, over and upon Twentyfifth avenue nue to Gravesend bay.

Beginning at Third avenue and Thirty-ninth street; thence along Thirty-ninth street to Second avenue; thence along Second avenue to Sixtieth street.

Together with all stands, switches, turn-outs, turntables, connected with or appurtenant to said railroad and railroads, and all

extensions of and branches from said railroads now owned, constructed or operated, or that may hereafter be owned, constructed or operated by the said lessor, and all and singular the emoluments, revenue, income, rents, issues and profits of said railroads and extensions and branches.

Also all and every franchise, right and privilege to construct or operate said railroad or railroads, or any railroad or railroads now constructed or operated by the lessor, or that may hereafter be constructed or operated by or on behalf of the lessor upon any portion of the line or route of railroad of the lessor, or any extension or extensions thereof, or branch or branches therefrom.

Also all the lessor's right, title and interest in and to all and singular the several pieces or parcels of land occupied or used in or for the construction or operation of any portion of said railroad or railroads of the lessor, and in and to all streets, highways and public places in or on which the track or tracks of said railroads are located.

Also all real estate, and every interest of every nature in and to real estate, together with the buildings and improvements thereon and the appurtenances thereto, situated in either of said counties of Kings or Queens, now owned by said lessor or leased to it, or which may hereafter be owned or leased by said lessor or acquired by it; subject, however, to the conditions contained in the conveyances and leases to said lessor.

Also all and every franchise, right, privilege and easement, of whatsoever kind or nature now or hereafter owned, possessed or exercised by said lessor, or to which it may be or become entitled, as respects the construction, maintenance or operation of the said or any railroad or railroads now or hereafter owned, leased or operated by it in either of the said counties of Kings and Queens.

Also all and every franchise, right, privilege and easement of whatsoever kind or nature now owned, possessed or exercised by said lessor, or which may hereafter be owned, possessed or exercised by said lessor, or to which it may be or become entitled under and by virtue of any act of the Legislature of the State of New York, or any contract or agreement between it and the State of New York, or any contract or agreement between it and the city

of Brooklyn, or by said city, or any grant made by the Common Council of the city of Brooklyn, or by said city, or by any resolution of the Common Council of the city of Brooklyn, or under or by virtue of any authority whatsoever authorizing said lessor or its grantors or assignors, to construct, maintain, or operate, a railroad in, over, upon or along or across any portion of any street, avenue or highway or public place, in said city of Brooklyn, or in the said county of Kings or said county of Queens, by whatsoever name said street, avenue, place or highway may now or hereafter be known.

Also all and every franchise, right and privilege which said lessor now has or may hereafter acquire to extend the route of its railroad or railroads, or to construct a branch or branches therefrom, or in any manner connected with the construction, maintenance or operation of any extension or branch.

Also all and every franchise, right, privilege and easement of whatsoever kind or nature now owned, possessed or exercised by said lessor, or which may hereafter be acquired by it, or to which it may become entitled under or by virtue of any contract or agreement between it and any person or corporation for the use of the railroad or railroads, track or tracks, or any portion thereof, belonging to such person or corporation; subject, however, to the conditions of such contracts or agreements.

Also all horses, harness, cars, locomotives, engines, tools, implements, machinery, railroad equipments, power stations, electrical appliances and equipments, stable equipments and fixtures, office furniture and office fixtures, and all other property, of whatsoever kind or nature except money, credits and securities, acquired, owned or possessed by said lessor for use in the construction, maintenance or operation of said demised railroad or railroads and properties, or any extension or branch thereof, or which may hereafter be acquired by said lessor for such use.

Saving and excepting from this grant and lease the franchise, right and privilege of the lessor to be a corporation and necessary for its continued existence and organization as such.

To have and to hold the said railroad and railroads, real estate, improvements and appurtenances, franchises, rights, privileges.

easements, and grants, and personal and other property hereinbefore described unto the said lessee and its successors for and during the term of nine hundred and ninety-nine (999) years from the date of this lease shall take effect.

II.

The lessor convenants and agrees that the lessee shall, during the term by this lease demised and during any extension or extensions thereof, peacefully and quietly enjoy the franchise, rights, privileges and easements, railroad, railroads, real estate and properties herein demised, without let or hindrance from the lessor, or from any person or corporation whatsoever claiming under or through the lessor.

III.

The lessor further convenants and agrees that it will, at any time, upon the reasonable request and at the cost and expense of the lessee or its successors, execute, acknowledge and deliver to the lessee or its successors, any and all such other or further instruments and assurances in the law for the better granting, demising and securing to the lessee or its successors said franchises, rights, privileges, easements, railroad and railroads, real estate and property by this lease granted and demised or intended so to be, which it, the said lessee or its successor or successors, or its or their counsel learned in the law shall reasonably advise, devise or require.

IV.

The lessor further covenants and agrees that all moneys, credits or securities on hand at the date this lease shall take effect, less the amount required to pay and discharge the indebtedness, obligations and liabilities of the lessor as of that date other than its bonded indebtedness upon bonds issued or assumed by it, and less the amount of its surplus earnings diminished by a pro rata amount of accrued interest and accrued rentals agreed to be paid by the lessor and a pro rata amount of taxes for the current year estimated upon the amount of the taxes for the preceding year, shall be used, applied and expended by the lessor in payment, at the request of the lessee, from time to time of the cost of convert-

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ing the railroads of the lessor into an electric railroad, or into any other kind of railroad authorized by law, which shall be approved of by the lessor and lessee, and if said moneys, credits and securities be not required for such purpose, then they shall be expended in the payment as aforesaid of the cost of additions, improvements, extensions, branches and equipments of the said railroads and properties of the lessor other than those necessary to keep said railroad and properties in good condition and repair and other than those necessary to preserve and secure efficiency in the operation of said railroad or railroads. Provided, however, that the lessor shall pay and discharge its said indebtedness other than its bonded indebtedness and its liabilities assumed by the lessee, as of the date when this lease shall take effect, and also the said pro rata amount of accrued interest upon its said bonded indebtedness and of its rentals and shall pay over to the lessee upon demand the said pro rata amount of taxes for the current year, estimated as aforesaid.

v.

The lessor further covenants and agrees to issue three million dollars (\$3,000,000) of its capital stock now unissued, but authorized to be issued, within six months after the delivery of this lease, and to sell and dispose of the same at par, and also to issue three million dollars (\$3,000,000) of its bonds, now unissued, but authorized to be issued, which said bonds shall be issued from time to time, as requested by said lessee, and shall be sold or disposed of for the highest price bid or offered therefor, and the proceeds of said stock and bonds, less any premium realized or received on the sale of the said bonds, shall be expended by the lessor in payment at the request of the lessee, from time to time of the cost of converting the railroads of the lessor into an electric railroad or into any other kind of railroad authorized by law, which shall be approved of by the lessor or lessee, and if all of such proceeds be not required for such purpose, then any balance shall be expended by the lessor in payment as aforesaid of the cost of such additions, improvements, extensions, branches and equipments to the said railroads and properties of the lessor as in its judgment and in that

of the lessee shall be necessary or advantageous to the property of the lessor or the interest of the lessee, other than those necessary to keep the said railroads and properties in good condition and repair, and other than those necessary to preserve or secure efficiency in the operation of said railroad or railroads, and it is agreed that all expenses incident to the issue, sale and disposition of said stock and bonds shall be borne and paid by said lessee.

VI.

The lessee further covenants and agrees that it will, at least six months before the date fixed for the redemption or payment of bonds issued, authorized to be issued or assumed by said lessor at the date of this lease shall take effect, issue at the highest price obtainable therefor a new series of bonds, secured by mortgage or mortgages covering if necessary all its franchises, rights, privileges and property, of whatsoever kind or nature, which said mortgage or mortgages shall be for an amount equal to, but not greater than, the principal of the bonds to be redeemed and paid, and which said new or renewal bonds shall bear the lowest rate of interest at which the same can be sold or disposed of at par, and that the lessor will, from time to time, during the continuance of this lease, issue bonds in renewal of outstanding bonds falling due secured by a like mortgage or mortgages covering property of the lessor upon like terms and conditions; all expenses incident to the making of any such mortgage and the issue, sale and disposition of any such bonds shall be borne and paid by the lessee.

The lessor further agrees that it will apply the proceeds realized upon the sale of said bonds, in the payment and redemption of the bonds falling due, and in renewal of which they were issued and not otherwise, and that it will credit any surplus of the proceeds realized on any such bonds on account of rent due or thereafter to become due to the lessor from the lessee under the terms of this lease. `The lessor hereby covenants and agrees to apply from time to time in discharge of the interest falling due upon any bonds made or assumed by it the moneys paid by the lessee as rent on account of said interest.

VII.

The lessor further agrees that the amount of annual rental hereinafter stipulated and agreed to be paid by the lessee shall, after the issue of any new bonds in renewal or redemption of old bonds, be reduced in an amount equal to the reduction of the annual interest affected by the redemption of outstanding bonds by the issue of new bonds in lieu thereof, at a lower rate of interest.

VIII.

The lessor further covenants and agrees that the lessee may collect and receive to its own use all rents falling due subsequent to the date this lease takes effect, under or by virtue of any lease, contract or agreement, except this lease, between the lessor and any person or corporation for the use of the track or tracks of the said railroads or any portion thereof, belonging to the lessor, or for the use or occupation by any person or corporation of any property mentioned in this lease or covered by its terms or intended so to be. And the lessee agrees to account and pay over to the lessor so much of the said rent as shall have accrued prior to the said date.

IX.

The lessor further covenants and agrees that it will use every effort to maintain and preserve its corporate existence and organization during the continuance of this lease and will take any and all proceedings authorized by law for the extension of its charter or charters, and that it will endeavor to obtain the right to construct such extensions of the route of its railroads and such branch or branches therefrom as shall be approved by the lessor and lessee, and to that end will take such proceedings as may be authorized by law; the expense of all proceedings for obtaining such extensions of its charter or charters and of all proceedings for obtaining the right to construct such extensions and branches of the route of its railroads shall be borne and paid by the lessee.

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The lessor further covenants and agrees that in the event of the expiration of this lease or other sooner termination thereof, it will

pay to the lessee the actual cost of all property, extensions, branches, additions, improvements and equipments, made, acquired and paid for by said lessee out of its own funds for use in connection with the operations of the railroads of the lessor, less the cost of such part thereof as was required to preserve said railroads, extensions, additions, improvements and equipments in good repair and serviceable condition, and less the cost of such part thereof as was necessary to preserve and secure efficiency in the operation of said railroad.

XI.

The lessor agrees to transfer and deliver to the lessee at the date this lease shall take effect all supplies and materials then on hand for use in connection with the construction, maintenance or operation of said railroad, upon payment by said lessee to the lessor of the cost price thereof, upon which payment the lessee promises and agrees to make such transfer and delivery.

XII.

The lessor covenants and agrees that the lessee shall have the right from time to time to sell and dispose of all horses, cars and materials which shall not be required for further use in construction, maintenance and operation of said railroads by reason of the conversion of the said railroads from a horse or steam railroad into an electric railroad, or such other kind of railroad as may be approved by the lessor and lessee, and to apply the proceeds realized upon any such sale to the construction of such extensions, branches, additions and equipments of said railroads as shall be approved by the lessor, and not otherwise, which said extensions, branches, additions and equipments shall be the property of the lessor.

XIII.

The lessor hereby constitutes and appoints the lessee its attorney and agent, with full power and authority to institute any suit or proceedings in the name and stead of the lessor for the collection of any rents payable or falling due to the lessor aforesaid subse-

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quent to the date this lease shall take effect, and with full power and authority to institute and conduct any and all condemnation proceedings which may be necessary, the expenses of all which suits and proceedings are to be borne and paid by the lessee.

XIV.

The lessee hereby leases and hires from the lessor the said railroad and railroads, franchises, rights, privileges, easements, real estate and property hereinbefore mentioned, described and demised, for and during said term of nine hundred and ninety-nine years from the date this lease takes effect, and upon the terms and conditions in this lease expressed, and agrees to pay to the lessor therefor an annual rental, which rental shall be at the rate of 10 per cent. net per annum upon the capital stock of the lessor from time to time outstanding, not in excess of twelve million dollars (\$12,000,000), and also agrees to pay to the lessor during the said term as additional rental the interest on the bonded indebtedness of the lessor upon bonds issued or assumed by it, at any time outstanding, not in excess of six million nine hundred and twenty-five thousand dollars (\$6,925,000), and to make such payments as follows:

The rental equal to 10 per cent. net per annum on the capital stock of the lessor, as hereinbefore provided, shall be paid quarterly on the first day of July, October, January and April in each and every year.

The rental equal to the interest on the bonded indebtedness of the lessor on bonds issued or assumed by it shall be paid by the lessee to the lessor from time to time at least five days before the semi-annual interest shall become due and payable by the terms of said bonds respectively.

The lessee also covenants and agrees to pay to the lessor during the term herein demised as rental the interest on all bonds at the time hereafter outstanding issued by the lessor, not in excess of \$6,925,000, either in renewal or extension of, or for the purpose of the redemption, payment or discharge of the said bonds issued or assumed by said lessor and to make such payment to the lessor

at least five days before the semi-annual interest shall by the terms of said bonds respectively become due and payable.

For all of the aforesaid payments well and truly to be made during the term by this lease demised, the said lessee hereby binds itself and its successor or successors firmly by these presents.

XV.

The lessee further covenants and agrees, in addition to the rental hereinbefore provided to be paid and as part thereof, to pay and discharge within a reasonable time after the same shall become due, any and all taxes, assessments, license fees, car licenses, water rents, charges and impositions whatsoever, whether ordinary or extraordinary, which may be levied, confirmed, imposed or assessed by any lawful authority upon the lessor, its capital, or shares of capital stock or dividends or the said demised railroad or railroads, real estate, personal property, franchises or easements, or any part thereof, or for the use or enjoyment thereof, by State, municipal or other authority during the term by this lease demised; provided, always, that the lessee shall have the right before making such payment to contest the validity of any such tax, assessment or charge; and in case such tax, assessment or charge shall be contested as aforesaid, the time occupied in such contest shall not be deemed a part of a reasonable time within which the lessee is required to make such payment as aforesaid. Should the lessee fail to make payment of any tax, assessment, license fee, charge or imposition, within the time herein required. then the lessor may after the expiration of said time pay the same, and the lessee agrees to repay the amount so paid to the lessor on demand.

XVI.

The lessee further covenants and agrees during the term by this lease demised to pay all reasonable expenses of keeping up the organization of the lessor and to furnish suitable offices for the lessor free of rent, including heat and light, and in case the lessor and lessee are unable to agree as to the amount of the reasonable expenses necessary to keep up the organization of the lessor, such

amount shall be determined by the method of arbitration in this lease provided for.

XVII.

The lessee further covenants and agrees to pay all rentals accruing after the date when this lease takes effect, under the terms of any contract or agreement or lease then existing between the lessor and any person or corporation for the use of the railroad track or tracks, or any portion thereof belonging to such person or corporation, or for the use of any real estate or property leased by the lessor from any person or corporation.

XVIII.

The lessee further covenants and agrees that any mortgage hereafter issued by the lessor to secure bonds issued for the payment or redemption, or in renewal of any outstanding bonds of the lessor or any outstanding bonds assumed by the lessor shall not be subject to this lease or to any of the provisions thereof, but that the lien of any such mortgage or mortgages upon the property by this lease granted and demised shall take precedence of and constitute a prior lien to this lease and to any and all liens created by this lease and to any franchise, right, privilege, property or interest acquired by the lessee under the terms of this lease and covered by such mortgage, hereafter issued as aforesaid; provided, always, that the principal of any such mortgage or mortgages and the bonds secured thereby shall not exceed the sum of \$6,925,000.

XIX.

The lessee further covenants and agrees that in case any bonds issued for the redemption and payment of any bonds mentioned in this instrument or covered by its terms shall sell for less than their par value, then the lessee will pay to the lessor an amount equal to the difference between the par value of such bonds and the amount for which they should be sold, which amount so paid must be applied by the lessor in the payment and redemption of said outstanding bonds.

XX.

The lessee further covenants and agrees that all extensions, branches, additions, improvements and additional equipments to the property of the lessor which shall be made during the term of this lease and which shall be paid for out of moneys belonging to the lessor, or out of the proceeds of either the stock or bonds or property of the lessor, or other moneys of the lessor, shall be property of the lessor.

XXI.

The lessee further covenants and agrees that it shall have the right to and will not make or construct any extensions, additions, branches and improvements, or furnish any equipments to the said railroad and railroads and properties by this lease demised to be paid for out of its own funds other than such as shall be necessary to keep said railroads and properties in good condition and repair, and to preserve efficiency in the operation of said railroad until after the said unissued stock and bonds of the lessor shall have been issued and the proceeds realized upon the sale of said stock and bonds shall have been expended as in this lease provided, and that it will not construct or apply for the right to construct any extension or branch of said railroad or railroads without first obtaining the consent in writing of the lessor thereto.

XXII.

The lessee further covenants and agrees that it will proceed faithfully and diligently with the work of converting the said railroad and railroads into an electric railroad, or into such other kind of railroad as shall be approved by the lessor and lessee; and that in the event that the said moneys belonging to the lessor on hand at the date this lease takes effect, after the deductions aforesaid and the proceeds of said stock and bonds of said lessor authorized to be issued, but unissued, shall be insufficient to pay and discharge the cost of converting the said railroad and railroads of the lessor into an electric railroad, or into such other kind of railroad as may be agreed upon by the lessor and lessee, that then and in the event the lessee will forthwith furnish and supply all such

sums of money, materials and supplies as may be requisite and necessary for that purpose, and will proceed faithfully and diligently with the work of constructing and converting said railroad and railroads into an electric road or such other kind of railroad as may be agreed upon by the lessor and lessee.

XXIII.

The lessee further covenants and agrees that at the expiration of this lease, or upon any sooner termination thereof, all property, extensions, branches, additions, improvements and equipments constructed, made or furnished by the lessee out of its own funds to the said railroad or railroads or property shall be and become the property of the lessor upon the payment by the lessor of the cost thereof, as in this lease provided.

XXIV.

The lessee further covenants and agrees, upon the expiration, or any sooner termination of this lease, to surrender, transfer and deliver to the lessor all materials and supplies on hand for use in the construction, maintenance or operation of said railroads, which materials and supplies shall be paid for by the lessor at their cost price.

And the lessee further covenants and agrees at the expiration of this lease, or any sooner termination thereof, that it will execute and deliver to the lessor a good and sufficient deed conveying to the lessor any real estate acquired by the lessee for use in connection with the construction, maintenance or operation of said railroad or railroads and property upon payment by the lessor of the cost price thereof, as in this lease provided.

XXV.

The lessee further covenants and agrees, at the expiration or any sooner termination of this lease, to surrender to the lessor all property, additions, improvements and equipments which shall be furnished, constructed or completed out of the proceeds of the stock or bonds of the lessor, or moneys advanced by the lessor subsequent to the delivery of this lease, or from the proceeds of sales of property of the lessor, equal in value and in as good condition as when so furnished, constructed and completed, reasonable wear and tear excepted.

XXVI.

The lessee covenants and agrees not to grant to any corporation the right to use the tracks or any part of the tracks of the lessor's railroads, or any extension or extensions thereof, or branch or branches therefrom, without the consent in writing of the lessor to such use shall have first been obtained; and the lessee also agrees not to assign this lease or any interest therein without the consent in writing of the lessor being first had and obtained, and that in the event that it does assign said lease or any interest therein without such consent, then this lease shall at the option of the lessor cease and determine as to said lessee, and all rights of the lessee thereunder or in the term hereby demised or any part thereof shall be at an end.

XXVII.

The lessee further covenants and agrees that it will at its own proper cost and expense operate and run the said railroad and railroads during the said term, and will maintain, preserve and keep the said railroad and railroads, or any extension or branches thereof, real estate, properties and premises by this lease demised, and every part thereof, in good order, repair and condition, and will rebuild all buildings and replace all property destroyed by fire; and will, at the expiration or termination of this lease for any cause, return and deliver the said railroad and railroads, real estate and properties by this lease demised, to the party of the first part in as good order, condition and repair as they were at the date this lease takes effect, reasonable wear and tear excepted, excepting, however, all property of the lessor sold by the lessee the proceeds of which shall have been applied to the improvement of the leased property, and will surrender said franchises, rights and privileges, easements and property unimpaired by any act of the lessee.

XXVIII.

The lessee further covenants and agrees that it will at all times during the continuance of this lease, at its own expense, keep the said cars, tools, implements, machinery and equipments in good order, condition and repair, and will as the same shall be worn out and rendered unserviceable, supply new cars, tools, implements, machinery and equipments, at its own expense, so that the said railroad and railroads shall always be kept and maintained in good condition and effective working order.

XXIX.

The lessee further covenants and agrees that it will at all times during the continuance of this lease, at its own expense, comply with all lawful requirements of the statutes of this State and resolutions and ordinances of the local authorities now existing or that may hereafter be passed or adopted with respect of the construction, maintenance and operation of said railroads, extensions or branchese thereof, and that it will pave and keep in repair such portion of the streets, avenues and highways upon which said railroads or any extensions or branches thereof now exist, or may hereafter be constructed, in accordance with the lawful requirements or any statutory or municipal regulations with respect thereto.

XXX.

The lessee further covenants and agrees that it will at all times during the continuance of this lease, at its own expense, keep said railroads supplied with sufficient motive power, rolling stock and equipment, so as fully to accommodate the public traffic; and that it will operate said railroads, extensions and branches, so that they shall furnish all reasonable conveniences and facilities to the public; and that it will use all reasonable efforts to maintain, develop and increase the business of the said railroads hereby demised, or of any additions thereto, or any extensions or branches thereof, now existing, or which may hereafter be constructed.

[Assembly, No. 98.]

XXXI.

The lessee further covenants and agrees that the lessor and its duly authorized committee or agent may at all times during the term by this lease demised enter in and upon and have free access to the railroads and properties by this lease granted and demised, and that it, the lessee, will furnish to such committee or agent every facility to examine into the condition of the said railroads and properties, and the system and manner of operating said railroads.

XXXII.

The lessee further covenants and agrees that it will not at any time during the continuance of this lease reduce the fare charged upon said railroads or upon any additions, extensions or branches thereof, below the present rate charged to each passenger for a continuous ride thereon, without the consent of the lessor in writing first had and obtained.

XXXIII.

The lessee further covenants and agrees that it will at the expiration or any sooner termination of this lease for any cause, transfer, deliver and return to the lessor, horses, harness, cars, locomotive engines, tools, implements, machinery, railroad equipment, power stations, electrical appliances and equipments, stable equipments and fixtures, office furniture and office fixtures, and all other property of like kind or nature then owned or possessed by it for use in the maintenance and operation of said demised railroad and railroads, and that said property so returned shall be equal in value to the property received by it at any time from the lessor under the terms of this lease; excepting, however, all property sold by the lessee, the proceeds whereof shall have been applied to the improvement of the leased property.

XXXIV.

The lessee further covenants and agrees to hold, save and keep harmless and indemnify the lessor from and against the expense of the defense of any and all actions involving the validity of this No. 98.] 1795

lease, or the validity of the franchises, rights and easements of the lessor, or the title of the lessor to any real estate, property or premises covered by the terms of this lease; and further agrees to notify the lessor of the commencement of any action against the lessee involving like questions, and to allow the lessor to interplead therein without objection and to assist it in the effort so to do: and further to hold, save and keep harmless and indemnify the lessor from and against the expense of any and all actions which shall be pending against the lessor on the date this lease shall take effect, or which may hereafter, during the said term or the continuance of this lease, be brought against the lessor for injuries to persons or property, or for causing the death of any person on account of negligence in the maintenance or operation of said railroad and from and against any judgment existing against the lessor upon like causes of action on the date this lease takes effect, or at any time thereafter during the continuance of this lease; also from and against the expense of any action upon any other cause of action now pending or which may be hereafter brought against the lessor and against any judgment rendered in any of said actions.

And the lessee further agrees to hold, save and keep harmless and indemnify the lessor from and against the expense of the defense of any action which shall be pending at the date of the expiration or any sooner termination of this lease, or which shall thereafter be brought against the lessor or lessee for injury to persons or property, or for causing the death of any person, on account of negligence in the maintenance or operation of said railroads during the continuance of this lease, and from and against any judgments that may be rendered in any such action, less the amount which shall have been paid by the lessee, under or by reason of the preceding indemnity clause, upon causes of action of a like character arising prior to the date of this lease.

XXV.

The lessee further covenants and agrees to deposit or cause to be deposited in the Brooklyn Trust Company, or such company or companies, as trustees, as may be designated by the lessor, on the date of the delivery of this lease, and prior to the date of the delivery of possession thereunder, the sum of four million dollars (\$4,000,000) as a guarantee and security for the performance by it of each and every covenant contained in this lease on its part to be kept and performed, which sum of four million dollars (\$4,000,000) shall be invested in Brooklyn City or New York City or United States government bonds, or in such other securities and mortgages as shall be approved by the lessor and the lessee, all of which securities and mortgages shall be deposited with the said trustee or trustees.

XXXVI.

The securities and mortgages in which said guarantee fund is invested may from time to time be changed, with the consent of the lessor and the lessee, but whatever the market value of any of said securities and mortgages shall have so depreciated as to reduce said guarantee fund by such depreciation below four million dollars (\$4,000,000) then the said lessee agrees, upon the request in writing of said lessor, to make good such depreciation in cash or securities, or to substitute in place of the depreciated securities and mortgages other securities and mortgages approved by the lessor, which shall be of a market value sufficient to restore said fund to four million dollars (\$4,000,000) within ninety days after being requested in writing so to do.

XXXVII.

It is mutually agreed between the lessor and lessee that the interest received upon said four million dollars (\$4,000,000) shall be paid by the trustees to the lessee as the same shall from time to time accrue and be collected, until such time as the trustee shall have been notified in writing by the lessor that the said lessee is in default in the payment of the rental reserved in this lease, or any part thereof, or is in default in making any payment on its part agreed, or provided, or required to be made by any provision of this lease.

When the lessee shall be so in default as aforesaid, then the said trustee or trustees, upon the request in writing of the said lessor No. 98.]

or lessee, shall from time to time apply the interest of the said four million dollars (\$4,000,000) as the same shall accrue and be collected, and two hundred and fifty thousand dollars (\$250,000) of the principal of the said guarantee fund, or so much thereof as may be necessary, to the payment of said rental as the same becomes due, but said four million dollars (\$4,000,000) guarantee fund shall, under no condition or circumstances, be impaired by expenditures and disbursements of any kind, or otherwise, to an extent which shall reduce said fund below three million seven hundred and fifty thousand dollars (\$3,750,000).

XXXVIII.

The lessee further covenants and agrees that no dividend shall be paid on its capital stock, or any part thereof, when said guarantee fund shall be less than \$4,000,000, or when the market value of the securities constituting said fund shall be less than \$4,000,000.

XXXIX.

The lessee further covenants and agrees that in the event of the termination of this lease by reason of any breach, default, or omission on its part in the performance of either or any of the covenants on its part to be kept and performed, and said guarantee fund of four million dollars (\$4,000,000) deposited with the said trustee, or any balance thereof, shall at once become the sole and absolute property of the lessor, and shall be paid and transferred by said trustee or trustees to the lessor, its successors or assigns, not by way of penalty, but as liquidated and stipulated damages; and it is mutually agreed that if this lease shall terminate otherwise than on account of the breach, default, or omission of the lessee, then the said four million dollars (\$4,000,000), or any balance thereof, shall be paid to the lessee.

XL.

It is mutually agreed that when the \$6,000,000 mortgage and bonds of the lessor shall become payable in 1916, or 1941, the lessee may pay off the aforesaid mortgage and bonds; and should the

lessee so elect and make such payment then the trustee of the guarantee fund of \$4,000,000 shall pay over the whole of the said guarantee fund to the lessee, and all of the provisions of this lease relating to said guarantee fund shall thereupon cease and determine. And in the event that said mortgage shall thus be cancelled and this lease shall thereafter be terminated for any reason other than a default or omission on the part of the lessee in the performance of any of the covenants on its part to be kept and performed, then the lessor shall pay to the lessee, in addition to the other payments herein required by it to be made, the sum of \$6,000,000 advanced by the said lessor for the payment and discharge of said mortgage. But in the event that this lease shall be terminated through or because of any default or omission upon the part of the lessee in the performance of any of the covenants on its part to be kept and performed, then the lessor shall be required to pay to the lessee the sum of \$2,000,000; but shall retain and keep unto itself the benefit and advantage of such payment of said mortgage and bonds by said lessee to the extent of \$4,000,000, not by way of penalty, but as liquidated and stipulated damages.

XLI.

It is mutually agreed between the parties hereto that the trustee or trustees holding said guarantee fund may from time to time be changed by the consent of the lessor and lessee, and that in case said trustee, or any of such trustees, shall be dissolved or cease to exist, or refuse to become for any cause incapable to act, and the lessor and lessee shall be unable to agree upon a successor in the trust, that then and in that event either party hereto, upon eight days' notice to the other, may apply to the Supreme Court for the appointment of a successor to such trustee or trustees, with like powers and duties. The compensation of the trustees shall be fixed and be paid by the lessee, and the lessee may, with the consent of the lessor, agree with any trustee with respect to the liability of any trustee and in respect to other proper details of the trust aforesaid.

XLII.

The lessee further covenants and agrees that in case of default by it in the payment of the rental in this lease reserved and agreed to be paid, and if said rental, or any part thereof, shall remain unpaid for the space of sixty days from and after the time when it shall become due and payable, or if the said lessee shall be in default in the performance of either or any of the covenants in this lease contained and on its part to be kept and performed, and such default shall continue for the period of sixty days after notice and demand of performance by the lessee, given in writing by the lessor to the lessee, or if the lessee shall fail or refuse to comply with any decision of arbitrators appointed as herein provided, for sixty days after service of notice of such decision upon it, then, and in either of said events, the terms of this lease created, granted and demised shall at the option of the said lessor end and cease and determine, and the lessor shall have the right to enter upon and take possession of the property by this lease granted and demised, and the same have and possess as of its former estate, and without such entry may recover possession thereof in the manner provided by statute, by summary proceedings; it being understood that all right of any further demand or re-entry other than that above specifically referred to is hereby waived by the lessee.

XLIII.

It is mutually covenanted and agreed between the lessor and lessee that no waiver of any breach or default of the other by either shall extend to or be taken to effect any subsequent default, or to impair the rights arising thereunder, unless such subsequent breach or default shall itself be waived.

XLIV.

The lessee further covenants and agrees that nothing in this lease contained is intended or shall be construed as authorizing the lessee to increase the funded debt of the lessor, or to mortgage or create any lien upon the railroad or railroads, franchises and property by this lease demised, without consent of the lessor. `

And the lessee further covenants and agrees that nothing in this lease contained is intended to or shall be construed as an express or implied warranty on the part of the lessor of its right to construct, maintain or operate said railroad or railroads, or any part thereof, or of its right, title or interest in or to any of the rights, privileges or franchises, easements and property by this lease demised.

And the lessee further covenants and agrees that in the event that the right, title or interest of the lessor of, in or to the said railroad or railroads, franchises, rights, privileges and property by this lease demised shall for any reason or cause fail to be in any particular defective, it, the said lessee, will not claim and shall not be entitled to claim or recover from the lessor any damage whatsoever for or by reason of such failure or defect.

XLV.

It is mutually covenanted and agreed between the lessor and lessee that if the continued use of any real estate included in or covered by the terms of this lease shall not be necessary or required for the maintenance or operation of said railroad or railroads, extensions or branches, then, in that event, the lessor, with the consent in writing of the lessee, may sell and dispose of said real estate, and the proceeds realized therefrom shall be expended by the lessor for the same purposes as in this lease provided for the expenditure of the proceeds of the stock and bonds of the lessor.

XLVI.

It is further mutually covenanted and agreed between the lessor and lessee that in case of any disagreement between them concerning the performance of either of the covenants and stipulations in this lease contained on the part of the other party to be kept and performed, or concerning their respective rights, duties and obligations under the provisions of this lease, such disagreement shall be submitted to arbitration as follows:

In case either lessor or lessee shall desire the appointment of arbitrators and arbitration, the party so desiring the appointment of arbitrators shall state to the other in writing the point or points No. 98.]

of difference to be submitted to arbitration, and shall within ten days thereafter select an arbitrator to act upon its behalf, and notify the other party in writing thereof, and thereupon said other party shall within ten days thereafter select its arbitrator and notify the party demanding said arbitration of its selection. The arbitrators thus selected shall, within five days thereafter, meet, and may adjourn from time to time, and after hearing the respective parties shall, within ten days after the last hearing, render their award in writing, and their decision shall be binding and conclusive upon the lessor and lessee. If the arbitrators so selected are unable to agree, they shall, within fifteen days after their last hearing, select a third arbitrator, to whom all the evidence taken shall be submitted, with such further evidence as either party may give, and after such further hearing as the arbitrators or a majority of them shall permit, the decision of a majority of the three shall be binding and conclusive upon the lessor and If the two arbitrators first chosen can not agree upon the selection of a third arbitrator, then such arbitrator may be appointed by any person selected by the lessor and the lessee for that If the lessor and the lessee can not agree upon a person to select said third arbitrator, then either of them may, upon a notice of eight days to the other, apply to any judge of the Supreme Court in the Second Department to appoint a third arbitrator. upon notification, either party hereto shall fail, within the time designated, to select an arbitrator, as required by the terms hereof, then, in that event, the arbitrator appointed by the other party shall have the right to proceed and fully determine the matters submitted, and render his decision and award in writing, which award and decision when made in writing and served upon either party by the other shall be binding and conclusive upon the lessor and lessee. Either party against whom the arbitrators report shall have sixty days within which to comply with the decision of said arbitrators, and said arbitrators shall have power for good cause shown from time to time to extend the time for such compliance for a further period not exceeding in all thirty days.

XLVII.

It is mutually covenanted and agreed between the lessor and lessee that this lease shall not be binding or valid as to either of the parties hereto until approved by the vote of the stockholders of the lessor and lessee as required by law, and that if so approved, this lease shall be delivered to the lessee at such time and upon such terms and conditions as shall be agreed upon by the boards of directors of said lessor and lessee, but notwithstanding such approval and delivery, this lease shall not go into effect nor shall the lessee be entitled to enter into possession of the premises and property by this lease demised until said four million dollars (\$4,000,000) shall have been actually deposited either in cash or in securities, or both, pursuant to the terms of this lease, with said Brooklyn Trust Company or companies designated by said lessor and lessee, nor until a certificate of said Brooklyn Trust Company or such companies to that effect is indorsed hereon or attached hereto, which certificate shall be duly executed by said Trust Company or companies under its or their corporate seals, and shall state that said four million dollars (\$4,000,000), or such portion thereof as they respectively hold, is held upon the trusts and subject to the terms, covenants and stipulations and conditions in this lease contained with respect thereto.

In witness whereof, the said lessor and lessee have each caused this indenture to be duly executed and its corporate seal to be hereo affixed and attested by its secretary, the day and year first above written.

THE BROOKLYN HEIGHTS RAILROAD CO.,

By H. I. NICHOLAS,

[L. s.] Attest:

President.

RICHARD N. Young, Secretary.

THE BROOKLYN CITY RAILROAD COMPANY,

By Daniel F. Lewis,

[L. s.] Attest:

President.

A. A. H. Bogardus, Secretary. No. 98.]

1803

CITY OF BROOKLYN, COUNTY OF KINGS.

Be it remembered, that on this 14th day of February, before me personally appeared Daniel F. Lewis, to me known and known to me to be the person who signed the foregoing instrument, and who, being by me duly sworn, did depose and say: That he resides in the city of Brooklyn; that he is the president of The Brooklyn City Railroad Company named in the foregoing instrument; that he knows the seal of said corporation, and that the seal affixed to the foregoing instrument is the seal of said company, and was so affixed thereto by the order of the board of directors of said company; and he, the said Daniel F. Lewis, executed the foregoing instrument in the name of said company as president thereof by like authority. That W. A. H. Bogardus is the secretary of said company, and in his presence said W. A. H. Bogardus, by like order of the board of directors of said company, signed his name to the said instrument as secretary of the said company.

In witness whereof, I have hereunto set my hand and affixed my official seal this 14th day of February, 1893.

W. H. Jennings,

[L. S.]

Notary Public, Kings County, New York.

STATE OF NEW YORK, CITY AND COUNTY OF NEW YORK.

Be it remembered, that on this 14th day of February, one thousand eight hundred and ninety-three, before me personally appeared Harry I. Nicholas to me known and known to me to be the person who signed the foregoing instrument, and who, being by me duly sworn, did depose and say: That he resides at Babylon, L. I.; that he is the president of The Brooklyn Heights Railroad Company named in the foregoing instrument; that he knows the seal of said corporation, and that the seal affixed to the foregoing instrument is the seal of said company, and was so affixed thereto by the order of the board of directors of said company; that he, the said Harry I. Nicholas, executed the foregoing instrument in

the name of said company as president thereof by like authority. That Richard N. Young is the secretary of said company, and in his presence said Richard N. Young, by like order of the board of directors of said company, signed his name to the said instrument as secretary of said company.

In witness whereof, I have hereunto set my hand and affixed my official seal this 14th day of February, one thousand eight hundred and ninety-three.

EDWARD CORNELL,

[L. S.]

Notary Public, Orange County.

I, W. A. H. Bogardus, as secretary of the Brooklyn City Railroad Company, do hereby certify that at a meeting of the stockholders of the Brooklyn City Railrod Company duly called and held at the office of said company in the city of Brooklyn, on the 15th day of February, 1893, the within and foregoing contract of lease bearing date February 14th, 1893, between the said The Brooklyn City Railroad Company and the Brooklyn Heights Company was duly approved by a vote of the stockholders of the said The Brooklyn City Railroad Company owning at least two-thirds of the stock of said company present and voting in person or by proxy at the said meeting thereof called separately for that purpose upon notice duly given, mailed and published.

Witness my signature and the seal of the said The Brooklyn City Railroad Company this 15th day of April, 1893.

W. A. H. BOGARDUS,

[L. S.]

Secretary.

COUNTY OF KINGS, CITY OF BROOKLYN, 88...

Be it remembered that on this 15th day of April, one thousand eight hundred and ninety-three, before me personally appeared W. A. H. Bogardus, to me known and known to me to be the person who signed the foregoing certificate and who being by me duly sworn, did depose and say: That he resides in the city of Brooklyn; that he is the secretary of the Brooklyn City Railroad Company named in the foregoing certificate; that he knows the seal of the

No. 98.7

said corporation and that the seal affixed to the foregoing certificate is the seal of the said company.

In witness whereof, I have hereunto set my hand and affixed my official seal this 15th day of April, 1893.

W. H. JENNINGS,

[L. S.] Notary Public, Queens County, New York.

'I, Richard N. Young, as secretary of the Brooklyn Heights Railroad Company, do hereby certify, that at a meeting of the stockholders of the Brooklyn Heights Railroad Company, duly called and held at the office of said company, in the city of Brooklyn, on the 14th day of February, 1893, the within and foregoing contract of lease, bearing date February 14, 1893, between the said The Brooklyn City Railroad Company and The Brooklyn Heights Railroad Company, was duly approved by a vote of the stockholders of the said The Brooklyn Heights Railroad Company owning at least two-thirds of the stock of said company present and voting in person or by proxy at the said meeting thereof called separately for that purpose upon notice duly given, mailed and published.

Witness my signature and the seal of the said The Brooklyn Heights Railroad Company, this 17th day of April, 1893.

RICHARD N. YOUNG,

[L. S.]

Secretary.

STATE OF NEW YORK, CITY AND COUNTY OF NEW YORK.

Be it remembered that on this 17th day of April, one thousand eight hundred and ninety-three, before me personally appeared Richard N. Young, to me known and known to me to be the person who signed the foregoing certificate and who, being by me duly sworn, did depose and say: That he resides in the city of New York; that he is the secretary of the Brooklyn Heights Railroad Company named in the foregoing certificate; that he knows the seal of the said corporation and that the seal affixed to the foregoing certificate is the seal of the said company.

In witness whereof, I have hereunto set my hand and affixed my official seal this 17th day of April, 1893.

GEORGE W. DAVIDSON,
Notary Public, Queens County.

[L. S.]

The New York Guaranty and Indemnity Company hereby certifies that the sum of four millions of dollars in cash, mentioned and referred to in the within and foregoing lease has been deposited with it and that it holds the same upon the trusts and subject to the terms, covenants, stipulations and conditions in said lease contained with respect thereto; it being expressly understood and agreed that the said trustee is not to be responsible or liable for the character or value of the securities in which said fund may be from time to time invested, but that its sole undertaking is to hold said fund and the income thereof subject as aforesaid, and to exercise due diligence in the care and custody of said fund and the securities in which it may be from time to time invested and in the collection of the income of said trust fund and otherwise as respects the said trusts.

In witness whereof the said The New York Guaranty and Indemnity Company has caused this certificate to be duly executed and its corporate seal to be thereunto affixed this 6th day of June, 1893.

NEW YORK GUARANTY AND INDEMNITY CO.,

EDWIN PACKARD,

President.

[L. S.] H. A. MURRAY, Secretary.

CITY AND COUNTY OF NEW YORK, 88 .:

Be it remembered, that on this 6th day of June, one thousand eight hundred and ninety-three, before me personally appeared Edwin Packard, to me known and known to me to be the person who signed the foregoing instrument, and who, being by me duly sworn, did depose and say; that he resides in the city of Brooklyn, that he is the president of the New York Guaranty and Indemnity Company named in the foregoing instrument; that he knows the seal of said corporation, and that the seal affixed to the foregoing instrument is the seal of said company, and was so affixed thereto by the order of the board of directors of said company; and he, the said president executed the foregoing instrument in the name of

said company as president thereof by like authority. That Henry A. Murray is the treasurer of said company, and in his presence said Murray by like order of the board of directors of said company, signed his name to the said instrument as treasurer of said company.

In witness whereof, I have hereunto set my hand and affixed my official seal this 6th day of June, one thousand eight hundred and ninety-three.

JAMES M. PRATT,

[L. S.] Notary Public 133, City and County of New York.

[Indorsed.]

THE BROOKLYN CITY RAILROAD COMPANY TO THE BROOKLYN HEIGHTS RAILROAD COMPANY. LEASE. STATE OF NEW YORK,

Dated, February 14, 1893.

OFFICE OF SECRETARY OF STATE.

Filed and recorded June 7, 1893.

TH. E. BENEDICT,

Deputy Secretary of State.

STATE OF NEW YORK,
OFFICE OF THE SECRETARY OF STATE.

I have compared the preceding with the original lease of the Brooklyn City Railroad Company, to the Brooklyn Heights Railroad Company, filed and recorded in this office on the 7th day of June, 1893, and I do hereby certify the same to be a correct transcript therefrom and of the whole thereof.

Witness my hand and the seal of office of the Secretary of State, at the city of Albany, this 1st day of July, one thousand eight hundred and ninety-five.

ANDREW DAVIDSON,

Deputy Secretary of State.

[L. S.]

REORGANIZATION OF THE LONG ISLAND TRAC-TION COMPANY.

To the Stockholders of the Long Island Traction Company:

The subscribers, having been requested by holders of a large amount of the stock of the Long Island Traction Company to undertake the reorganization of the affairs of that company and the readjustment of its debts and liabilities, have prepared the following:

PLAN OF REORGANIZATION.

- I. A new company, under the name of the Brooklyn Rapid Transit Company, or by or under such other name as may be determined by the committee, shall be organized under the laws of the State of New York to acquire the assets and franchises of the Long Island Traction Compony, and to assume all its liabilities, except those which may be extinguished under the plan. The new company shall issue 5 per cent. fifty-year gold mortgage bonds to the amount of \$7,000,000, bearing interest from October 1, 1895, and shall have a capital stock of \$20,000,000. The \$7,000,000 of bonds shall be secured by a mortgage upon all the property and franchises of the new company of every description.
- II. The stockholders of the old company shall deposit their stock with the Central Trust Company of New York, under a stockholders' agreement lodged with that company, and pay \$10 per share in cash for each share of old stock. Every depositing stockholder who shall make such payment in full when and as called for by the committee shall receive:
 - (1) One share of new stock for every two shares of old stock.
- (2) New bonds at par to the amount of the cash subscription of \$10 per share paid.
- (3) New stock to an amount equal to 75 per cent. of the amount of cash subscription of \$10 per share paid.

The present outstanding participation certificates, representing stockholders' subscriptions of \$2 per share previously paid, will be received and credited on account at their face value in payment of cash subscriptions of \$10 per share. As special consideration for their promptness in coming to the company's rescue at a criti-

cal time, holders of said participation certificates shall in addition receive in exchange for their participation certificates stock of the new company to an amount equal to 50 per cent. of the face value of said certificates, or, if the holders so elect, they may receive (in lieu of all other benefits under the plan) payment in cash for such certificates at par with interest at 6 per cent.

III. The new bonds shall be used for the following purposes:

To take up the old collateral trust notes To stockholders for subscriptions paid in To be retained by the new company for its corporat purposes (less any amount disposed of by the committee, as provided in the stockholders' agree	. 3,000,000 e	
ment.		00
	\$7 ,000,000	
IV. The new stock shall be disposed of as follows: To exchange for old stock, one share for two		00
cent. of their holdings	2,250,000	00
cent. of their holdings		00
per cent	167,000	00

\$20,000,000 00

1,176,750 00

Stockholders of the old company who may elect so to do may, at the time of the deposit of their shares under the agreement, pay to the Central Trust Company of New York, as provided in the agreement, an amount bearing the same proportion to the amount

in the discretion of the committee, the balance, if any, to be returned to the treasury of the new

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of the principal and accrued interest of the collateral trust notes as the par of their stock bears to the par of the entire outstanding stock, which amount shall be applied to the payment and satisfaction, pro tanto, of such collateral trust notes; and shall, by making such payment, become entitled to receive a proportionate amount of the new bonds and stock set apart for taking up said collateral trust notes.

V. The moneys received are to be applied as follows:

• 11		
To acquire and provide for notes outstanding, about	. \$620,000	00
To acquire and provide for obligations and expenses	I	
of the receiver of the Long Island Traction Com-	•	
pany to July 1, 1895, about	600,000	00
To provide for claims for damages and otherwise	<u>,</u>	
against the Brooklyn Heights Company, the Trac	-	
tion Company and its receiver, about	500,000	00
To be used for betterments, for expenses of reorgani	•	
zation and other purposes	1,280,000	00
	\$3,000,000	00

VI. Certificates of deposit shall be issued to the stockholders depositing their shares, as provided in the agreement.

A syndicate is to be formed on reasonable and usual terms, to furnish the money necessary to carry out this plan, including the payment of subscriptions of the stockholders who shall fail to pay the amount of their subscriptions, and by such payments and to the extent thereof the syndicate underwriting the payment of such subscriptions shall be entitled to and shall represent and succeed to all the rights which the non-subscribing stockholders would have been entitled to if they had paid their subscriptions.

VII. The shares of the new company may, in the discretion of the committee, be represented by voting trust certificates for five years, as provided in the reorganization agreement.

VIII. It is estimated that the available assets of the new company, when its organization shall have been completed, will be substantially as follows:

Guarantee fund Long Island Traction Company, esti-		
mated, June 19, 1895	\$3,878,510	00
Stock of Brooklyn, Queens County and Suburban		
Railroad Company	2,000,000	00
Stock of Brooklyn Heights Railroad Company	200,000	00
Right to application towards betterments of proceeds		
of real estate (estimated)	800,000	00

The committee's estimate of moneys required for betterments is based largely upon the opinions of competent experts. The committee concurs in the opinion of these experts that, with the economies resulting from the proposed expenditures for betterments, the proportion of operating expenses (including taxes) to gross receipts may be reduced to 60 per cent. or less. It is now 69 per cent. Assuming that these opinions are correct, and that the experts' further estimates of an increase of at least 10 per cent. a year in gross earnings is conservative, as the committee believes, there should be after payment of all the fixed charges a considerable net income applicable to supplies or dividends.

For full particulars and details of the plan and agreement reference is hereby made to the original thereof, which is filed with the Central Trust Company of New York.

Stockholders may deposit their stock with the Central Trust Company of New York, and receive trust certificates representing the same, at any time on or before the 15th day of July, 1895.

The cash subscription is payable as follows: Five dollars per share on or before July 15, 1895, and \$5 per share on or before September 2, 1895.

NEW YORK, June 25, 1895.

FREDERIC P. OLCOTT, ROSWELL P. FLOWER, ANTHONY N. BRADY, JOHN G. JENKINS, GEORGE W. YOUNG, MARSHALL S. DRIGGS, ALFRED J. POUCH,

Committee.

LONG ISLAND TRACTION COMPANY.

AGREEMENT AND PLAN OF REORGANIZATION.

Agreement made this 25th day of June, 1895, between Frederic P. Olcott, Roswell P. Flower, Anthony N. Brady, John G. Jenkins, George W. Young, Marshall S. Driggs and Alfred J. Pouch, a committee acting at the request and on behalf of stockholders of the Long Island Traction Company, hereinafter called the committee, of the first part, and the respective holders of the stock of the said company, who have assented and who shall hereafter assent to this agreement by depositing their certificates of stock as hereinafter provided, of the second part.

Whereas, The Long Island Traction Company has become insolvent and unable to pay and discharge its debts and liabilities in full, and its properties are in possession of a receiver appointed by an order of the Circuit Court of the United States for the East ern District of Virginia, and

Whereas, It is necessary for the preservation and protection of its property and of the rights and interests of its creditors and stockholders that a plan of reorganization should be adopted, and the parties of the first part have, at the request of a large number of stockholders of the company, consented to act as a committee to effect such reorganization:

Now, therefore, in consideration of the premises, and of the agreement hereinafter contained, and for other valuable consideration, the parties agree together as follows:

First. The said Frederic P. Olcott, Roswell P. Flower, Anthony N. Brady, John G. Jenkins, George W. Young, Marshall S. Driggs and Alfred J. Pouch, are hereby constituted and appointed a reorganization committee, to exercise the powers and perform the duties hereinafter set forth, and they consent to act in that capacity.

Second. The committe shall have power to bid in or purchase the property or franchises or both of the traction company at any

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sale of the same or any part thereof, and generally to exercise all the powers, authority and discretion which the holders of the certificates of deposit issued or to be issued hereunder, or any of them, might or could exercise singly or collectively as stockholders; and to use, if necessary, the shares of stock deposited hereunder for the purpose of purchasing and acquiring said property and franchises and to pay for said property and franchises such amounts as in its judgment may be necessary to protect the interest of the certificate holders. It shall cause a new corporation to be formed under the laws of New York, and shall have the right to take all such steps and do all such acts as it shall be advised by counsel are requisite and necessary to effect a valid organization of such new corporation.

Third. The committee shall have power to convey, or cause to be conveyed, to such new company all such property and franchises, and shall accept and receive in payment therefor the stock and bonds of such new company, that is to say:

Capital stock	\$20,000,000
Five per cent. 50-year gold mortgage bonds, bear-	
ing interest from October 1, 1895	7,000,000

Said bonds shall be payable in gold coin in fifty years from their date, with interest at the rate of 5 per cent. per annum, payable in like gold coin semi-annually. The mortgage securing the same shall be in such form and contain such provisions as the committee shall approve, and shall convey to the trustee thereunder all the property and franchises of the new company.

Fourth. The committee shall invite, by proper publication, to be determined by it, the stockholders of the traction, to assent to and become parties to this agreement by depositing their stock certificates with the Central Trust Company of New York, and shall fix a time within which it may be done. Each stockholder who shall deposit his stock certificate, with transfer thereof to the committee or in blank duly executed, shall receive therefor a certificate or certificates of said trust company in the form or substantially the form hereunto annexed, marked "A," provided that

such assenting stockholder shall, at such time or times and in such manner and installments as may be determined by the committee, pay to the said trust company, for and to the credit of the committee and subject to its order, \$10 for every share of stock represented by his certificate, which payment shall be noted upon the certificate of deposit representing such stock. Only the holders of certificates of deposit upon which such amount of \$10 per share shall have been paid in full when and as called for by the committee shall be entitled to the benefits of this agreement. Holders of certificates of deposit upon which payment as aforesaid shall have been made in full shall be entitled to receive securities of the new company as follows:

- (1) One share of the stock of the new company of the par value of \$100 for two shares of stock of the old company.
- (2) New 5 per cent. bonds at par for the amount of cash payment of \$10 per share of old stock.
- (3) Shares of stock of the new company at par, to an amount equal to 75 per cent. of the amount of each payment of \$10 per share of old stock.

It is understood and agreed that participation certificates heretofore issued to those who contributed \$2 per share shall be received at their face value of \$2 per share on account of the cash subscription of \$10 per share.

Fifth. After the organization of the new company and the acquisition by it of the property or franchises of the old company, ceived in payment for said property, the committee shall dispose ceived in payment for said property, the committee shall dispose of such new securities as follows:

1. New bonds.— There shall be issued and distributed to the holders of joint and several collateral trust notes of the Long Island Traction Company and the Brooklyn Heights Railroad Company to an amount of the new bonds, the principal whereof shall be equal to the principal of said notes, amounting in the aggregate to \$1,875,000; and as hereinbefore provided, to the persons who shall pay the cash deposit of \$10 for each share of old stock, an amount of such bonds equal to the amount of such cash deposit,

in the aggregate, \$3,000,000 of principal. The remainder of such bonds, amounting to \$2,125,000 (except such as are used or applied as provided in article seventh) shall be left in the treasury of the new company to be sold or disposed of by the new company for its corporate purposes.

2. New stock.—There shall be issued and distributed to the holders of certificates of deposit of old stock, or to the persons who shall succeed to the rights of non-assenting stockholders, new stock to the amount at par of \$15,000,000; to the persons who shall pay the cash deposit of \$10 for each share of old stock, new stock to the amount at par of \$2,250,000; to the holders of joint and several collateral trust notes of the Long Island Traction Company and the Brooklyn Heights Railroad Company, new stock of par value equal to 75 per cent. of the par of such notes, in the aggregate \$1,406,250; to the holders of the participation certificates who shall turn in and apply such certificates on account of their cash subscriptions of \$10 per share, new stock equal to 50 per cent. of the face value of their participation certificates; and the remainder, subject to the provisions of article seventh hereof shall be returned to the treasury of the new company.

If the holders of participation certificates so elect, they may receive (in lieu of all other benefits hereunder) payment in cash for such certificates at par, with interest at 6 per cent.

Stockholders of the old company who may elect so to do may at the time of deposit of their shares hereunder, pay to the Central Trust Company of New York, in cash, for account of the committee, an amount bearing the same proportion to the amount of the principal and accrued interest of the collateral trust notes as the par of their stock bears to the par of the entire outstanding stock, which amount shall be applied to the payment and satisfaction, pro tanto, of such collateral trust notes; and shall, by making such payments, become entitled to receive a proportionate amount out of the new bonds and stock set apart as aforesaid for taking up said collateral trust notes.

Sixth. All moneys received by the committee from the contribution to be paid by stockholders or otherwise shall be used or disbursed by the committee for the following purposes:

- 1. To acquire and provide for outstanding notes about, \$620,000.
- 2. To acquire and provide for the obligations and expenses of the receiver of the Long Island Traction Company to July 1, 1895, estimated, \$600,000.
- 3. To provide for claims for damages and otherwise against the Brooklyn Heights Railroad Company, the Traction Company and its receiver, about \$500,000.
- 4. To the new company (less the necessary cash expenses of reorganization) to be applied to betterments and other purposes, \$1,280,000.

Seventh. The committee is authorized and empowered to use and apply the balances of bonds, stock and cash hereinbefore provided to be delivered to the new company, or any part thereof, for the purpose of paying interest or other fixed charges on the property, the expenses of reorganization, the compromise, adjustment and settlement of claims, or for such other purposes as it may deem necessary to enable it to carry out the plan of reorganization or to make it effective, and to sell or otherwise dispose of such bonds and stock, or so much thereof as may be necessary for such purposes, upon such terms and conditions and at such rates as it shall deem proper.

Eighth. A syndicate may be formed on reasonable and usual terms to furnish the moneys necessary to pay the cash subscriptions of stockholders who shall fail to pay their subscriptions of \$10 per share, and by such payments, and to the extent thereof, such syndicate shall be entitled to and shall represent and succeed to all the rights which non-subscribing stockholders or stockholders failing to pay such subscriptions would have been entitled to had they paid such subscriptions, it being understood and agreed that any stockholder who shall fail to pay any installment of his subscription when, and as called for by the committee, shall thereby forfeit all and any right to which he might have been entitled under the provisions hereof.

Ninth. The committee shall, in the distribution of the new securities, have power to provide for and make such issues of convertible scrip as shall be necessary to appropriately represent any fractional interest in said new securities.

Tenth. The committee is vested with full power and authority to do any and all acts and things necessary and proper in its judgment to be done to carry out this plan, including the power from time to time, to make such changes in the same as it may deem expedient or necessary. It shall have power to prescribe the form of the new securities and certificates of stock. It may construe the foregoing plan of reorganization, and its construction of the same, or any part thereof, shall be final, and it may supply defects and omissions in said plan necessary in its opinion to carry it out properly and effectively, and it shall be the judge of such necessity. It shall have power, from time to time, to add to the number of its members, and to fill any vacancy occasioned by death, resignation or otherwise. It may act by a majority of the members, either at a regular or special meeting convened on notice, or by writing signed by such majority, without a formal meeting. Any member may act at any meeting or otherwise by attorney in fact duly appointed under special or general power of attorney, in writing; it shall have power to fix and determine such penalties or conditions as it may deem proper for any failure to deposit stock certificates or pay assessments, and to make equitable provision for any case of lost or destroyed stock certificates. It may, in its discretion, extend any time fixed or limited for the deposit of stock certificates or payment of subscriptions or both, but such action shall not be taken to confer or establish any right or privilege upon or in favor of any other non-assenting stockholder or certificate holder, or any other stockholder or certificate holder who shall have paid his subscription in full. If necessary, in its judgment, it may provide funds for the purpose of carrying this agreement into effect, by means of loans for such times and at such rates of interest as it may deem proper, and to pledge as security therefor all or any part of the stock deposited hereunder.

Eleventh. It is expressly understood that the committee as-

sumes no responsibility for the execution of the above or any part thereof; the members, however, undertake in good faith to execute the same. They shall not be personally liable in any case for the acts of each other, nor for their own, except in case of willful malfeasance or gross negligence; nor shall they be personally liable for the acts of their agents or employes. The members of the committee may be or become pecuniarily interested in any of the property or matters which are the subject of this agreement, including a right to become members of the syndicate hereinbefore mentioned; and they shall be allowed their expenses for counsel fees and otherwise, and a reasonable compensation for their services hereunder. Any member may at any time resign by giving notice in writing to the other members, and the committee may settle any transaction with such member and give a full release and discharge.

Twelfth. If by reason of legal or other objection any of the provisions of this agreement can not be strictly performed by the committee, then it shall conform as near as may be to such provis-It shall have power to modify the plan. It shall give notice of any proposed modification by filing a copy thereof with the Central Trust Company of New York, and by advertising the substance thereof in at least two daily newspapers, one published in the city of New York and one in the city of Brooklyn, at least twice a week and during two weeks, and such advertisement shall be considered to have the full effect of personal notice to all certificate holders. All parties hereto who shall not express in writing their dissent from such modification and deliver such written dissent to the Central Trust Company of New York within two weeks from the date of the last publication of such notice, shall be considered to have assented to such modification. who may express such dissent shall be entitled to the return of the certificates representing their deposited stock and subscriptions which they may have paid, upon the surrender of their certificates of deposit issued hereunder, on the payment of their pro rata share of expense incurred up to the date of return, which shall not exceed 1 per cent. of the par value of their stock.

Thirteenth. The committee shall, within one year after the organization of the new company shall have been completed, and said new company shall have taken possession of the property, file its accounts with the board of directors of the new company, and the same shall be final, binding and conclusive upon all parties to this agreement.

The assent or approval of the committee, or a majority thereof, shall be a sufficient authority to the Central Trust Company for whatever may be done by it in the premises, including the delivery or payment to or upon the order of the committee of the shares deposited or cash contributed hereunder.

Fourteenth. The committee shall have power to cause the shares of stock of the new company, or any part thereof, to be held by voting trustees for such period not exceeding five years, with such powers of voting and otherwise, and on such terms and conditions, as it shall deem proper, and to cause voting trust certificates of beneficial interest to be issued accordingly, which shall be delivered to and accepted by the persons entitled hereunder to receive shares of the stock of the new company in lieu of corresponding amounts at par of stock certificates so receivable; but the voting trustees shall not be authorized to vote for or consent to the creation of any securities to be issued by the new company having priority of lien or participation over the stock (other than said mortgage bonds), nor to increase the amount of the capital stock of the new company, without the consent of the holders of at least two-thirds in interest of the outstanding voting trust certificates, to be given in writing; and in case such voting trust shall be so created the provisions hereof for issue or delivery of shares of stock of the new company shall be taken to apply to, and to be satisfied by such voting trust certificates.

Fifteenth. This agreement shall be printed, and copies thereof may be signed; all of said copies so signed shall be deemed and taken as constituting one original paper. The deposit of stock and the receipt of a certificate or certificates issued therefor, shall have the same effect as if the holder of such certificates had actually subscribed this agreement.

In witness whereof, the said parties have hereunto set their names or affixed their corporate seals the day and year first above written.

" A."

CERTIFICATE OF DEPOSIT OF CAPITAL STOCK OF THE LONG ISLAND TRACTION COMPANY.

Deposited under an agreement dated June, 1895, lodged with the Central Trust Company of New York, by and between the assenting stockholders and Frederic P. Olcott, Roswell P. Flower, Anthony N. Brady, John G. Jenkins, George W. Young, Marshall S. Driggs, and Alfred J. Pouch, committee.

The interest represented herein is assignable by transfer upon books kept by this company for that purpose by the holders hereof in person or by proxy upon surrender of this certificate subject to the terms thereof.

CENTRAL TRUST COM	PANY OF NEW YORK,
	Ву,
··· · ·	Vice-President.
,	
Secretary.	The parties of the control of the parties of the control of the co
NEW YORK,, 18	

VOTING TRUST AGREEMENT.

Agreement made this day of, 1865, between Frederic P. Olcott, Roswell P. Flower, Anthony N. Brady, John G. Jenkins, George W. Young, Marshall S. Driggs and Alfred J.

Pouch, a committee acting at the request and on behalf of stock-holders of the Long Island Traction Company, hereinafter called the committee, of the first part, and Frederic P. Olcott, Roswell P. Flower and Anthony N. Brady, hereinafter called the voting trustees, parties of the second part.

Whereas, In pursuance of an agreement and plan of reorganization made and entered into the day of, 1895, between the committee and certain holders of the capital stock of the said company, shares of the capital stock of the Brooklyn Rapid Transit Company (hereinafter called the Transit Company), a coporation organized as provided for in said agreement, are about to be issued pursuant to the said agreement and plan to and in the name of the voting trustees and to be represented by certificates of the said Transit Company, issued in the name of the trustees, and the said certificates are about to be deposited by the said trustees with the Central Trust Company of New York, as in said agreement and plan provided; and,

Whereas, The committee has requested said Central Trust Company of New York, to issue therefor, to and in the joint names of the trustees, certificates of said Central Trust Company of New York representing undivided equitable interests in the said shares of stock of the said Transit Company to be held in trust as aforesaid and has approved the form of the said certificates hereinafter set forth; and,

Whereas, The parties hereto are desirous that the trusts, powers and duties upon and subject to which the said shares of the said Transit Company so to be issued and deposited are to be held and disposed of by the said voting trustees, and the interests, rights and obligations to the holders and owners of the said trust certificates to be issued by the said Central Trust Company of New York representing the interests of said holders in the said deposited shares shall be more fully evidenced and declared by this instrument, now, this agreement,

Witnesseth:

All of the said shares of the capital stock of the said Transit Company shall be forthwith deposited with the Central Trust Company of New York, indorsed in blank by the voting trustees and said Trust Company shall issue therefor, to and in the joint names of the voting trustees, its stock trust certificates representing undivided equitable interests in the shares deposited and held in trust as aforesaid; and the said stock trust certificates shall be transferred only subject to this agreement, and upon books to be kept by said Central Trust Company of New York for that purpose. Said stock trust certificates shall be transferred by the voting trustees to or upon the order of the committee from time to time for the purpose of distribution and delivery and transfer, as provided in said agreement and plan of reorganization; but the voting trustees shall not be under any obligation to see to such application of such certificates or any of them.

The voting trustees may attend and vote upon the said deposited shares at any and all meetings of the stockholders of the said transit company in person or by proxy, but no such proxy shall be valid unless executed by a majority of the voting truseees or their successors for the time being. The voting trustees may also exercise, from time to time, and at any time in respect to all shares held in trust hereunder as aforesaid, all other rights and powers of absolute owners of such stock (including the right of consenting to any corporate act or instrument of the said transit company), except that any dividends declared on the said stock shall be payable to the registered holders of the said stock trust certificates pro rata; and except that the voting trustees shall have no authority to consent or to vote in favor of the creation of any lien or right of participation which shall or may have priority over the said stock of said company, nor to increase the existing amount of the capital stock of said transit company beyond the said amount of \$20,000,000 par value, provided that such consent or vote may be given with the consent in writing of the holders of not less than two-thirds in interest of the stock trust certificates aforesaid outstanding at the time.

A majority of the voting trustees shall constitute a quorum authorized to exercise any of the powers hereby vested in the voting trustees, and for the transaction of any business.

Any vacancies occurring among the trustees above named or appointed to act hereunder by resignation, refusal to act, or from any other cause, shall be filled by the other or others of them.

In case of the appointment of a new voting trustee or trustees hereunder, the shares remaining deposited with said Central Trust Company shall be transferred upon the books of the said Transit Company into the names of all the persons who shall thus be the trustees, and a new certificate or certificates therefor shall be issued, and shall be indorsed by the trustees in blank, and by them deposited with said trust company, to be held and disposed of in like manner as the certificates originally deposited.

Each of said voting trustees shall be liable only for his own acts, and then only for gross negligence or willful default.

The power of the voting trustees to vote or consent on or in respect of the shares held in trust hereunder shall determine on the first day of January, 1900, or sooner upon the consent of the voting trustees, or a majority of them, delivered to said Central Trust Company of New York, and the said voting trustees, or a majority of them, are hereby fully empowered and authorized to give and deliver such consent at any time in their sole and absolute discretion. Upon such expiration or termination, the shares of stock of the said transit company, then held hereunder, shall be distributed among the holders of the said stock trust certificates pro rata upon the surrender of the said stock trust certificates, duly indorsed, to said trust company.

The voting trustees, or a majority of them, shall, however, have the right, upon giving a like consent to terminate said trusts prior to said first day of January, 1900, as to any one or more shares held hereunder at any time and from time to time as they may elect. And thereupon the share or shares of stock of the said transit company so released shall be transferred and delivered to such registered holder or holders of the then outstanding stock trust certificates of said Central Trust Company of New York, and in such amounts as may be designated by the voting trustees, or a majority of them, upon surrender to the Central Trust Company of New York of a corresponding amount in interest of the said stock trust certificates.

Each of the said stock trust certificates of the said Central Trust Company of New York shall be substantially in the form hereto annexed, marked "Exhibit A."

Witness the signatures and seals of the respective parties hereunto subscribed and annexed, the day and year first above written. Sealed and delivered in

the presence of	1						•					 •			

EXHIBIT A.

CERTIFICATE OF THE CENTRAL TRUST COMPANY OF NEW YORK FOR THE DEPOSIT OF STOCK OF THE COMPANY.

Upon the termination of the trust upon which the said stock was deposited the holder hereof will be entitled to receive from this company, upon surrender of this certificate, shares of the capital stock of the said Brooklyn Rapid Transit Company.

The interest in said stock represented by this certificate is assignable only by transfer upon the books kept by the said trust company, for that purpose, by the holder hereof, in person, or by proxy, upon surrender of this certificate properly assigned.

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BOARD OF RAILROAD COMMISSIONERS OF THE STATE OF NEW YORK.

BOARD OF RAILROAD COMMISSIONERS,

OF THE STATE OF NEW YORK,

ALBANY, December 10, 1894.

Present.—Commissioners Samuel A. Beardsley, Michael Rickard, Alfred C. Chapin.

REPORT IN THE MATTER OF THE EXAMINATION OF THE BOOKS AND ACCOUNTS OF THE BROOKLYN HEIGHTS AND BROOKLYN CITY STREET SURFACE RAILROAD COMPANY OF THE CITY OF BROOKLYN.

Albany, December 10, 1894.

To the Honorable The Board of Railroad Commissioners of the State of New York:

Gentlemen.—Pursuant to a resolution passed on November 12th by your honorable board, I have examined the books and accounts of the Brooklyn Heights and the Brooklyn City Railroad Companies. This examination was ordered upon the receipt by the board of certain charges against these companies by Mr. H. M. Thompson, a stockholder of the Long Island Traction Company. The two railroad companies joined in requesting the board to order such an examination. The examination was begun on November 19th and concluded on November 28th.

HISTORY OF ORGANIZATION.

THE BROOKLYN CITY RAILROAD COMPANY.

This corporation was organized under the laws of this State upon December 17, 1853. Prior to 1892 its original capital of \$2,000,000 had been increased, as its business expanded and as it absorbed other lines, to \$6,000,000. In 1892 your board granted permission to the company to increase its capital to \$12,000,000 for the purpose of changing the system from horse [Assembly, No. 98.]

power to electricity. This work of conversion is still in progress. In addition to its capitalization of \$12,000,000, the Brooklyn City Company has issued bonds to the amount of \$6,000,000, and has assumed a funded indebtedness of acquired lines to the amount of \$925,000, making its total obligations, including capital stock, \$18,925,000.

THE BROOKLYN HEIGHTS RAILROAD COMPANY.

The Brooklyn Heights Railroad Company, chartered April 1, 1887, is a cable road having a total length of 1,166 miles, running on Montague street, Brooklyn, from Court street to the Wall street ferry. Its capital stock is \$200,000 and its bonded indebtedness \$250,000. All the stock of this company, except a sufficient number of shares to qualify its directors, is owned by the Long Island Traction Company.

THE LONG ISLAND TRACTION COMPANY.

The Long Island Traction Company is a corporation organized under the laws of Virginia. The charter bears the date of March 19. 1893. Its incorporators were: Felix Campbell, of Brooklyn, president and director; Crowell Hadden, of Brooklyn, vice-president and director; Henry A. Murray, of New York city, treasurer: John B. Summerfield, of Brooklyn, secretary and director; Silas B. Dutcher, of Brooklyn, director, and George W. Young, of Jersey City, director. The purposes for which the company was formed are "to conduct the business of purchasing, acquiring, holding, improving, developing, leasing, exchanging and selling real and personal property, including machinery, patent rights, letters patent and other rights for the supplying of power or the use thereof. to, upon or in work owned, leased or controlled by any railroad corporation or other corporation or individual, and to aid any corporation or individual in the construction, repair, improvement or extension of any such or other works by the advancing of money, the furnishing of credit, or otherwise, and also to purchase, subscribe for or otherwise acquire for any valid consideration, and to hold, use and dispose of the stocks, bonds and other evidence of

indebtedness of any corporation, domestic or foreign, with which it may have business relations, or may have power to contract, and to issue in exchange for said stocks, bonds and other evidences of indebtedness its own stock, bonds or obligations."

According to the statement of the officers, the capital stock of this company, 300,000 shares of \$100 each, par value, aggregating \$30,000,000, was issued for property consisting of stock and contracts, and for cash provided, out of which cash the \$4,000,000 guarantee fund under the Brooklyn City lease was furnished and deposited. The total amount of cash paid in was \$4,500,000, and in addition to the controlling ownership of the stock of the Brooklyn Heights Company, the Long Island Traction Company also owns all of the stock of the Brooklyn, Queens County and Suburban Railroad, except such as is held by the directors to enable them to qualify.

LEASE OF THE BROOKLYN CITY PROPERTY.

On February 14, 1893, the Brooklyn City Railroad Company executed a lease of all of its properties, including franchises rights of way, real estate and equipment to the Brooklyn Heights Railroad Company for 999 years, the consideration franchises, rights of way, real estate and equipment to the Brooklyn Heights Railroad Company for 999 years, the consideration being the payment by the Brooklyn Heights Company of 10 per cent. dividend on the capital stock of the Brooklyn City Railroad Company and all other fixed charges, including interest on its bonded indebtedness and organization expenses. By the terms of this lease the Brooklyn City Railroad Company was to expend in the conversion of its various systems from horse to electricity all of the money it received from the sale of \$3,000,000 of capital stock and \$3,000,000 of bonds, authorized but unissued at the time of the lease, and was to reserve to itself whatever surplus moneys resulting from previous operation there remained on hand at the time the control of the property was assumed by the Brooklyn Heights Company and whatever premiums were realized from the

sale of its stock and bonds. All accrued obligations at the time of taking possession were to be paid by the Brooklyn City Company The cost of such construction as remained uncompleted and such extensions as are from time to time necessary or desirable is to be paid for by the Brooklyn Heights Railroad Company, to be adjusted at the termination of the lease, or at such time and in such manner as may be agreed upon by the lessee and lessor corporations. To guarantee the faithful performance of the conditions of the lease, the lessee company agreed to deposit and did deposit in various trust companies and banks a guarantee fund of \$4,000,000, the income of which is to be paid to the lessee company. In case of default in the payment of any of the fixed charges of the lessor company, the lessee company is authorized to use \$250,000 of the guarantee fund, but no part of the guarantee fund can be impaired to an extent which shall reduce such fund below \$3,750,000. The lessee company took possession of the property of the Brooklyn City Company and began operation of the same on June 6, 1893, and has since continued to operate said system. On June 30, 1894, the Brooklyn City Railroad Company reported a total construction and equipment account of Since that date all of the funds of the Brooklyn **\$**18.839.934.13. City Railroad Company, except its surplus, have been expended in construction expenses, and the completion of the conversion, together with extensions and the construction of new roads, is now carried on by the Brooklyn Heights Company, under agreements and conditions provided for in the lease.

The total length of all tracks and sidings owned by the Brooklyn City Company and operated by the Brooklyn Heights Company, at the date of the last report, June 30, 1894, was 199.02 miles.

It is proper to state that every facility for a full examination of the books and accounts of the Brooklyn City and Brooklyn Heights corporations, was afforded your examiners by the officials of the respective roads. The accounts of the Brooklyn City Company were examined back to September 30, 1889, the date of the

last examination by a representative of your board. In the case of the Brooklyn Heights Company, it having been operating the lines of the Brooklyn City system only a year, a verification of the last annual report and of its quarterly statement rendered September 30, 1894, was deemed sufficient.

The method of accounts and the book-keeping of the Brooklyn Heights Company are admirably adapted to its purposes as lessee of the Brooklyn City system. The statement of its receipts are in such form and are so protected by checking devices and detailed reports, as to set forth the total income of the company for each day in a complete and correct manner, and also so as to place before the president on the succeeding morning an exhibit of the gross earnings upon each line operated, together with the number of cars in operation, the number of trips, the mileage of cars, the wages of employes and the net earnings after deducting wages. The expenditures of the corporation are controlled by requisitions, orders, audits and certifications by the various officers and employes through whose hands these accounts pass. auditing system in use, each entry upon the books of the corporation is certified to, first, by the auditing committee of the board of directors, then by the president, secretary, and treasurer, and by each employe through whose hands the voucher passes. elaborate and comprehensive system of accounting was devised by W. A. H. Bogardus, the secretary and treasurer of the company, and is so complete as to deserve notice and commendation.

The Brooklyn City books are the same as those used at the time of the organization of the road in 1853, the same ledger being still in service. No fault can be found with their accuracy, but more elaborate methods should have been adopted when the change of motive power was made from horses to electricity in order that there would have been a more intelligent division of the items of expense. The present secretary of the company, Mr. Swin, appreciates the necessity for a change in system to more nearly conform to the system of the lessee road, and a new set of books will be opened forthwith.

FINANCIAL CONDITIONS.

The following statements, tables and comparisons fully explain the financial condition of the companies under examination, the annual report of the Brooklyn Heights Company being analyzed first, as it is the operating company. The criticisms of Mr. Thompson may be briefly summarized as follows:

Brooklyn Heights: Rentals paid, \$1,434,941.50, no details to show what is included; differences in other fixed charges deducted from income; renewals of horses, \$11,160; trucking credit, \$13,311.39; repairs of road-bed, \$141,570.53; "no repairs of consequence would be required on a well-constructed electric road for five years."

Brooklyn City: Interest charged to construction, \$152,345.78; "not a proper charge, should be against income;" this amount also includes \$90,000, dividend on stock, chraged to construction which Mr. Thompson inquires about; reconstructing roadbed, general criticism on charges to construction rentals, fixed charges and dividends "do not correspond with payments by Brooklyn Heights Company;" general criticism of construction account of the company.

BROOKLYN HEIGHTS RAILROAD COMPANY.

Annual report for the year ending June 30, 1894.

Stocks and bonds:			
Capital stock		\$200,000	00
Bonds at 5 per cent. per annum		250,000	00
Cost of road and equipment:			
Cost of road		\$447,685	71
Cost of equipment:			
Cable cars and fixtures	\$ 5,775 60		
Horses	53,118 81.		
_		58,894	41
		\$506,580	12

Among the various items of property received by the Brooklyn Heights Company, as lessee from the Brooklyn City Company, were the horses which had been used in the operation of the Brooklyn City Company. Concerning these horses the two companies made a special arrangement, fixing upon them a price of \$185,920, with the condition that the Brooklyn Heights Company should make payments on this account as fast as it sold the horses, or in proper proportion as the horses died. Such payments were to be credited by the Brooklyn City Company to its equipment account. The books show that these credits have been properly made, and the item of \$53,118.81 is the inventoried value of the horses now in the possession of the Brooklyn Heights Company. The Brooklyn City Company has received \$151,896, leaving \$34,024 still due to it upon this account.

INCOME.

The income of the two roads must be considered together in order to arrive at an intelligent understanding of the transactions The year ending June 30, 1894, was the first under the operation of the lease. The Brooklyn Heights company had been in possession of the property during part of the month of June, 1893, but there was no adjustment or settlement of the accounts between the two roads until the construction fund of the Brooklyn City Company was exhausted. During the greater part of the year, therefore, the Brooklyn City was expending money on account of its own construction, and the Brooklyn Heights was also expending money on account of Brooklyn City construction, for which it was from time to time reimbursed. The Brooklyn Heights Company opened a set of books differing in many respects, as to the division of charges, from those of the Brooklyn Heights Company opened a set of books differing in may requirements of the new business, in respect to which the Brooklyn City books were inadequate. At the outset it was assumed that all charges for taxes and interest should be paid directly by the Brooklyn Heights Company, and this method prevailed for a time. Then it was decided that as the Brooklyn City Company was the

owner of the property, it should have the original receipts for all payments, and thereafter the rental for these purposes was paid to and distributed by the Brooklyn City Company. sults of this complication and the fact that charges and counterclaims were sometimes adjusted by charges and credits without the actual transfer of money, caused much confusion, and the further fact that the Brooklyn City Company was not always prompt in adjusting the accounts so far as the entries on its books were concerned, some of which were still unadjusted at the time of this examination, led to discrepancies in the rental statements. The net difference in dispute, however (281.03), is so small as to balanced had the blank issued by this board, upon which the report was made, been more comprehensive in its requirements, and the necessity for prompt adjustment thus been called to the attention of the officers of the two companies. Unless the form of the blank is changed, there will be apparent discrepancies each year between these two companies and between all other companies similarly related to each other, for the reason that the lessor road can only report its actual cash transactions in its rental account while the lesee road will report in total not only the amounts it paid for rental (including all charges), but the amounts due and accrued, and the interest and tax charges upon its own property. In the future, however, the Brooklyn Heights Company, in compliance with the suggestion of your examiner, will report annually in detail the total amount paid to the Brooklyn City Company, and on what account; the charges due and accrued deducted from income, and on what account, and also will separate such payments from the payments and charges upon its own property. Brooklyn City Company will report its rental in detail and its disbursements as now required by the blank, and its report should in future balance with the amounts in the Brooklyn Heights account reported to have been paid. A thorough examination of the books and vouchers of the Brooklyn Heights Company relative to its income account, warrants the statement that the income account of that company is a correct showing of its payments to and on account of the Brooklyn City Company. A new set of books,

which will be more in harmony with those of the lesee company, will be opened by the Brooklyn City Company as soon as final adjustment is made of the minor disputed items.

1833

The following are the statements in detail with analysis and explanation of the income accounts of the two companies for the year ending June 30, 1894:

BROOKLYN HEIGHTS RAILROAD.

Income account.			ł	
Gross earnings from operation			\$4,303,117	45
Less operating expenses (including tax	æs)	• •	2,673,391	73
Net earnings from operation			\$1,629,725	72
Income from other sources as follow	s, viz.:			
Interest on guarantee fund and misce	llaneous	in-		-
terest and rentals			189,339	49
Gross income from all sources	• • • • • • • • • • • • • • • • • • • •		\$1,819,065	21
DEDUCTIONS FROM INCOME	AS FOL	LOV	VS, VIZ.	
Taxes on property used in operation	of the roa	ad:		
On account Brooklyn Heights	\$2,314	63		
Paid Brooklyn City, rental	130,249	74		
Paid direct on account rental	17,597	77		
Due Brooklyn City rental	4,091	18		
Accrued, not due	$82,\!586$	41		
Taxes on earnings and capital			\$ 236,839	7 3
stock:				
On account Brooklyn Heights	\$21,420	20		
Paid Brooklyn City, rental	8,356	82		
Accrued, not due	19,500	00		
Taxes other than above:			49,277	02
Paid Brooklyn City, rental	\$2,985	23		
Paid direct on account rental	1,566			
Accrued, not due	17,958			
_			22,510	41

Interest on funded debt (all on account Brooklyn Heights), due and accrued:				
On bonds	@19 K00	ΛΛ		
	\$12,500			
On floating debt	8,444	13	\$20,944	13
Rentals:			Ψ20,044	10
Paid Brooklyn City, dividends	\$833,262	01		
Paid Brooklyn City, dividends	833,262			
Interest on mortgage, paid direct	,	24		
Rents, paid direct	18,997			
Due Brooklyn City, dividends	300,000			
Due Brooklyn City, interest	151,017			
Interest accrued, not due	10,583			
:			1,434,941	50
•		-		
			\$1,764,512	
Net income from all sources			$54,\!552$	
Surplus, June 30, 1893		• • •	60,968	36
Total surplus, June 30, 1894 •		· · · -	\$115,520	78
BROOKLYN CITY F	RAILROA	D.		
Income account:			ı	
Gross earnings from operation			\$2,149	01
Less operating expenses (including ta			· 22,374	
ness operating expenses (meruting ta	IACB)	· · · -		
Net deficit from operation	· · · · · · · · · · · · · · · · · · ·		\$20,225	63
Income from rental, viz.:				
Dividends	\$833,262	01		
Interest on funded debt	121,733	30		•
Taxes on real estate	132,603	72		
Taxes on earnings and capital stock	8,366	82		
Assessments	1,376	64		
-			\$1,097,332	49
Gross income from all sources	· • • • • • • • • • • • • • • • • • • •		\$1,077,106	86
		=		

STATEMENT OF CREDIT CLAIMED BY THE BROOKLYN CITY COMPANY ON ACCOUNT OF RENTAL.

	*	•
Due from Brooklyn Heights:		
For dividends	\$300,000 00	
For interest on funded debt	150,283 96	
For taxes on property used in opera-		
tion	3,626 85	
		\$453,910 81
Deduct amount in dispute, subject to	adjustment.	*305 89
	·	\$453,604 92
	:	
ANALYSIS AND COMPARISON CLAIMED TO HAVE		
	Brooklyn City.	Brooklyn Heights
For dividends	\$833,262 01	\$833,262 01
For interest	121,733 30	120,999 62
For taxes	140,960 54	141,591 79
Assessments	1,376 64	•••••
Total as reported	\$1,097,332 4 9	\$1,095,853 42

* Difference between \$441.86 for which Brooklyn City had taken credit in other accounts and \$747.75, subject to adjustment.

763 59

18 20

\$1,097,350 69 \$1,096,617 01

and charged to maintenance...

Add amount received and credited

PAYMENTS FROM NET INCOME AS FOLI	ows, viz.:
Dividends paid by Brooklyn Heights:	
Two and one-half per cent. on \$9,706,130	\$242,653 25
Two and one-half per cent. on \$11,624,350.40	290,608 76
Two and one-half per cent. on \$12,000,000	300,000 00
Due from Brooklyn Heights, advanced, by Brooklyn City, 2½ per cent. on \$12,000,000 Paid from surplus by Brooklyn City railroad 2 per	300,000 00
cent. \$12,000,000.	240,000 00
	\$1,373,262 01
Deficit as reported for year ending June 30, 1894	\$812,041 94
Surplus June 30, 1893 \$719,913 77 Premiums on stock 7,941 66 Premiums on bonds 212,916 00 Due from Brooklyn Heights on ac-	
count of rental, payable July 1, 1894. 453,604 92	\$1,394,376 35
,	φ1,554,510 55
Total surplus, June 30, 1894	
Total surplus, June 30, 1894	\$582,334 41
STATEMENT OF DEFICIT, JUNE 30, Due from Brookyn Heights Railroad:	\$582,334 41
STATEMENT OF DEFICIT, JUNE 30, Due from Brookyn Heights Railroad: For dividends\$300,000 00	\$582,334 41
STATEMENT OF DEFICIT, JUNE 30, Due from Brookyn Heights Railroad: For dividends	\$582,334 41 1894.
STATEMENT OF DEFICIT, JUNE 30, Due from Brookyn Heights Railroad: For dividends	\$582,334 41 1894.
STATEMENT OF DEFICIT, JUNE 30, Due from Brookyn Heights Railroad: For dividends	\$582,334 41 1894.
STATEMENT OF DEFICIT, JUNE 30, Due from Brookyn Heights Railroad: For dividends	\$582,334 41 1894. \$453,910 81 240,000 00
STATEMENT OF DEFICIT, JUNE 30, Due from Brookyn Heights Railroad: For dividends	\$582,334 41 1894. \$453,910 81 240,000 00
STATEMENT OF DEFICIT, JUNE 30, Due from Brookyn Heights Railroad: For dividends\$300,000 00 For taxes on property used in operation	\$582,334 41 1894. \$453,910 81 240,000 00
STATEMENT OF DEFICIT, JUNE 30, Due from Brookyn Heights Railroad: For dividends\$300,000 00 For taxes on property used in operation	\$582,334 41 1894. \$453,910 81 240,000 00 99,282 14 20,225 63 \$813,418 58
STATEMENT OF DEFICIT, JUNE 30, Due from Brookyn Heights Railroad: For dividends\$300,000 00 For taxes on property used in operation	\$582,334 41 1894. \$453,910 81 240,000 00 99,282 14 20,225 63 \$813,418 58

Deductions from income as follows,		•		
viz.: Taxes on property used in opera-				
tion of road:				
Proportion due from and paid by				1
Brooklyn City Railroad	\$58,023	69		
Amount paid by Brooklyn Heights	100 000	7 0		
to Brooklyn City Railroad	132,603	72	•	
Amount due from Brooklyn Heights	9 696	0E		
paid by Brooklyn City Railroad	3,626		\$194,254	26
Taxes on earnings and capital	·		"	
stock:				
Proportion due from and paid by				
Brooklyn City Railroad	\$30,992	14		
Amount paid by Brooklyn Heights				
to Brooklyn City Railroad	8,356	82		
Taxes other than above:			39,348	96
Paid Comptroller for Railroad Com-				
mission due from and paid by				
Brooklyn City Railroad	\$ 1,349	41		
Interest on funded debt:	, , ,			
Amount paid by Brook-				
lyn Heights to Brook-		1		,
lyn City Railroad \$121,733 30				
Amount due from			·	1
Brooklyn Heights				
paid by Brooklyn		,		
City Railroad 150,283 96				
	4272,017	26		
Interest on floating debt:				
Due from and paid by Brooklyn City				
railroad	8,916	90	W 4 W 000	7 0
_			515,886	79
Net income from all sources			\$561,220	07
•		_		

TOTAL RENTAL ACCOUNT CLAIMED TO HAVE BEEN PAID AND TO BE DUE.

•									
	Brooklyn City.	Brooklyn Heights							
Paid dividends	\$833,262 02	" /							
Due dividends	300,000 00	,							
Paid taxes	140,960 54	141,591 79							
Due taxes	3,626 85	4,091 18							
Paid interest	121,733 30	120,999 62							
Due interest	150,283 96	151,017 67							
Paid assessments	1,376 64	• • • • • • • • • • • • • • • • • • • •							
_	\$1,551,243 30	\$1,550,962 27							
Net difference in dispute	• • • • • • • • • • • • • • • • • • • •	281 03							
	\$1,551,243 30	\$1,551,243 30							
TAXES ACTUALLY PAID.									
By Brooklyn City on own account.		\$90,365 24							
By Brooklyn Heights to Brooklyn		= '							
By Brooklyn Heights for Brooklyn	-	19,164 05							
By Brooklyn City for Brooklyn Ho		3,626 85							
•	•	\$254,116 68							
By Brooklyn Heights on own accou	nt	23,734 83							
Total	- 	\$277,851 51							
ACCRUED TAXES REPORTED	BY BROOKLY	YN HEIGHTS.							
On property used in operation of ro	ad	\$82,586 41							
Earnings and capital stock		19,500 00							
Other than above		17,958 90							
	- -	\$ 120,045 31							

^{*}Amount reported as received by Brooklyn City from Brooklyn Heights. The amount reported by the Brooklyn Heights as having been paid was \$141,591.79, or \$631.25 more than the amount reported by the Brooklyn City as having been received; and the amount reported due from the Brooklyn Heights to the Brooklyn City was \$444.33 in excess of the amount claimed, making the total discrepancy to be adjusted \$1.095.58. This item is involved in the final adjustment as between the two companies in balancing their accounts with the assessment charge of \$1.376.64, partof the Brooklyn City rental account credited to real estate, and the other items of \$747.75, \$763.59, \$18.20 and \$733.88 heretofore alluded to in the income statements.

BROOKYLN HEIGHTS DEFAULT, JUNE 30, 1894.

The following comparison shows the difference between the amount the Brooklyn City reported to have paid on account of the Brooklyn Heights, and the amount the latter charged itself with owing the Brooklyn City:

	Claimed by Brooklyn City.	Adjusted by Brooklyn Heights.
Dividends	\$300,000 00	\$300,000 00
Interest bonds	150,283 96	151,017 67
Taxes on property used in operat-	·	•
ing	3,626 85	4,091 18
motol .	@455 010 01	#4EE 100 OF
Total Deduct amounts subject to adjust-	\$ 453,910 81	\$ 455,108 85
	304 89	*1 500 00
ment	504 89 	*1,503 93
	\$453,604 92	\$ 453,604 92
COMPARISON OF INTEREST	ACCOUNTS.	- BROOKLYN
CITY		
Reported received from Brooklyn 1	Heights	\$121,733 30
Reported due from Brooklyn Heigh	ts	150,283 96
	-	, , , , , , , , , , , , , , , , , , ,
	-	\$272,017 26
BROOKLYN I	HEIGHTS.	
Reported paid Brooklyn City	• • • • • • • • • • • • • • • • • • • •	\$120,999 62
Reported due Brooklyn City		151,017 67
	_	\$979.017.90
	=	\$272,017 29
BROOKLYN HEIGHTS MONTH	LY PASSENGE	ER RECEIPTS.
1893		
July		·
August		,
September	378,382 36	\$1,198,792 34
		φ1,100,104 34

^{*} Made up of items, \$747.75 and \$756.18. Explained above.

1840		[Assmmbly,
October	\$358,495 73 322,780 58 322,433 13	
1894.	#900 100 FO	\$1,003,709 44
January	\$302,122 58 272,595 56 328,089 30	
April	\$337,622 94	902,807 44
May June.	404,789 35 436,319 36	1,178,731 65
		\$ 4,284,040 87
From advertising, etc	-	19,076 58 \$4,303,117 45
RECEIPTS FOR QUARTER ENDI	: NG SEÝTEM	BER 30, 1894.
JulyAugust	\$437,577 03 404,273 96	
September		\$1,247,844 94
From advertising, etc	-	\$1,252,289 48
COMPARISON PASSEN	GER RECEI	PTS.
Quarter ending September 30, 1894. Quarter ending September 30, 1893		. , ,
Increase, 1894	- 	\$49,052 60

A careful examination of the manner in which the receipts of the road are collected, taken from the time the fare is received by the conductor, its deposit in the receiving depot, its receipt in the office of the company, and its final deposit in the bank, each day's receipts from such source being deposited in their entirety, and of the bank books showing the daily deposits, proves conclusively that the actual receipts are as stated.

OPERATING EXPENSES.

The net total on this account, as reported by the company is \$2,673,391.73, and I have no hesitation in saying, as the result of the examination, that no item is charged against this account which does not belong there. In detail, the items that have been made the subject of criticism are, viz.: "Repairs of road-bed and track, \$141,570.53." The examination of this account shows that none of the cost for changing the road from horses to electricity was charged to the account, but that it was all for repairs of roadbed and track. The labor and material used in the repaving of the streets amounted in round numbers to \$70,000, and for the repairs, \$71,570.53. The repairs to the pavement were caused by the settling of the paving done in the previous year, and because of the strict requirements of the department of city works, which ordered most of the repaying. The amount thus charged to repairs of track ane special work, \$71,570.53, is not excessive. statement that no repairs would be required upon the road-bed and track of a properly constructed electric railroad in five years, is not in accordance with the facts. With the very best construction, constant renewals of special work, repairs of joints and repairs of paving are necessary.

"Renewals of horses, \$11,160."—This is the amount paid the Brooklyn City Company for the horses that died during the year, in accordance with the terms of the agreement elsewhere explained. When the horse account is finally closed out, the Brooklyn Heights Company expects to realize enough from the total sales to reimburse itself for the amount paid on account of dead horses and all other expenses on this account.

"Trucking Credit, \$139,311.39."—The Brooklyn City Railroad Company before its lease to the Brooklyn Heights Railroad Company did its own trucking, and, therefore, turned over to the

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Brooklyn Heights Railroad Company a large plant for this pur-The latter company continued the operation of this plant, organizing it as a separate department, with which it opened a ledger account. To this account was charged labor of employes, feed, repairs of trucks and other expenses, all properly chargeable to the department. The department was credited in the ledger at a uniform rate per diem for the use of the trucks or wagons of the department, and a corresponding charge was made to the operating account for which material was hauled. construction account was also charged with the use of the trucks in the same manner and upon the same basis. The charge made per diem for the use of trucks was fixed so that the account would yield no profit, hence after charging the account with the proper expenses and crediting the use of the trucks, the account balanced. There would, therefore, have been no necessity for the deduction of the amount, viz.: \$139,311.39, had it not been that the statement of expense, Table D, called for an enumeration which, in the judgment of the accountant, obliged him to again enumerate the expenses of the trucking department. For example, the wages of the men employed were put in the proper wage column, the horseshoeing, repairs to harness, stable equipment, and other expenses were also put in their proper account. The expenses had already been charged to operation, and charged to construction in proper proportions in the per diem charges; if it had not also been again fully charged in the wage, provender and other appropriate accounts, there would have been no occasion for the credit to operation and consequently no criticism. There is no question that the use of a track in hauling any supply or in the use of any operation account of the company, whether the cost includes the wages of the employes, or other expenses, should be charged against the account, for which the service was rendered, and the enumeration in Table D should not have been construed as calling for the wages in this department. As it was put in, however, the reports as rendered shows the correct cost of operation after the deduction is made.

All the remaining items	of opera	ting expe	nses	were	carefully
verified by comparison wit	h voucher	s and inv	estig	ation	as to the
character of charges, and	I have no	criticism	to r	nake	regarding
them.		. 1	1		

BROOKLYN HEIGHTS GENERAL BALANCE SHEET, JUNE 30, 1894.—ASSETS.

30, 1894.—ASSI	ETS.	,	
Cost of road	\$447,685 71	•	
Cost of equipment	58,894 41		
Current assets as follows, viz.:		\$ 506,580 1	2
·		19 641 0	
Cash on hand		13,641 9	14
Open accounts:			
Due from Brooklyn, Queens County			
and Suburban railroad	\$63,526 26		
Brooklyn City special construction	892,930 27		
Miscellaneous open accounts	44,989 73	1 004 110 0	
_		1,001,446 2	
Supplies on hand as per inventory		214,525 6)Z
Total assets	- 	\$1,736,193 9	92
LIABILITIE	S.		
Capital stock	\$200,000 00		
Funded debt	•		
_		\$45 0,000 (00
Interest on funded debt due and accr	ued	4,420 (00
Bills payable:	;	•	
Loans from banks and trust com-			
panies	\$500,000 00	y	
Mortgage on power-house	14,000 00		
Mortgage 77 Furman street	5,000 00		
-		519,000	00

\$2,983,785 66

Open accounts:		
Brooklyn City rental, default* \$112,761 32		
Bills on hand 147,425 72		
Sundry accounts 800 50		
Interest on bonds, Brooklyn City		
accrued		
Trustees' guarantee fund* 250,000 00		
	\$521,570	84
Taxes accrued, not payable	$122,\!359$	94
Rents accrued not payable	3,322	36
Profit and loss surplus	115,520	7 8
Total liabilities	\$1,736,193	 92
BROOKLYN HEIGHTS GENERAL BALANCE TEMBER 30, 1894.—ASSETS.	SHEET, SE	P-
Cost of road and equipment		
	\$504,113	12
Supplies on hand	\$504,113 164,980	
Supplies on hand	- •	77
	164,980	77
Accrued interest	164,980	77 50
Accrued interest	164,980 45,337	77 50
Accrued interest	164,980 45,337	77 50 80
Accrued interest	164,980 ± 45,337 ± 8,333 ± 8,333	77 50 80
Accrued interest. Due by agents of this company on account of traffic. Due by others (not agents of this company) on account of traffic.	164,980 ± 45,337 ± 8,333 ± 8,333	77 50 80 27
Accrued interest	164,980 45,337 8,333 6,858	77 50 80 27
Accrued interest	164,980 45,337 8,333 6,858 338,096	77 50 80 27 84 84
Accrued interest	164,980 45,337 8,333 6,858 338,096 338,096	77 50 80 27 84 84 89
Accrued interest . Due by agents of this company on account of traffic	164,980 45,337 8,333 6,858 338,096 338,096 17,992	77 50 80 27 84 84 89 85

^{*} The Brooklyn City rental default, as admitted by the Brooklyn Heights Company. was \$455,108.85. Part of this was paid with the interest received from the guarantee fund, part of it is represented by the \$250,000 liability, the liability being transferred from "Brooklyn City rental" to "Trustees' guarantee fund," and the balance is the item of \$112,761.32.

LIABILITIES.

Capital stock	\$200,000	00
Funded debt	250,000	00
Loans and bills payable	1,577,340	36
Interest on funded and floating debt due and ac-		
crued	11,443	63
Due for wages and supplies	132,632	25
Due companies and individuals (on open accounts)	14,680	59
Taxes accrued	199,933	60
Rentals account B. C. R. R. Co	86,958	33
Due for supplies and contracts, construction	324,776	08
Profit and loss surplus	186,020	82
- -	\$2,983,785	66

BROOKLYN HEIGHTS CONSTRUCTION AND EQUIPMENT ON ACCOUNT OF THE BROOKLYN CITY RAILROAD.

When the money of the Brooklyn City Railroad Company available for construction had all been expended, it became necessary, under the terms of the agreement, for the Brooklyn Heights Company to go and complete the construction and make desired extensions. For the purpose of obtaining money to do this work, the Brooklyn Heights Company entered into an arrangement with the New York Guarantee and Indemnity Company, whereby it was agreed that necessary funds to the extent of \$3,000,000 should be loaned them for this purpose, upon notes made by the Brooklyn Heights Company and indorsed by the Long Island Traction Com-Under the terms of the lease the money so expended was to become in effect a lien upon the property of the Brooklyn City, to this extent The Brooklyn City Company agreeing in the lease to reimburse the Brooklyn Heights Company either at the expiration of the lease or at such time and in such manner as might be agreed upon by the contracting parties for all moneys expended in extending or bettering the properties of the Brooklyn City Company. A committee representing the persons from whom this money was to be obtained was appointed, consisting of David

G. Leggett, G. G. Haven, Jr., and George W. Young, all well known in financial circles, and before the agreement was made to loan the money upon the above conditions, the construction charges of the Brooklyn Heights Company against the Brooklyn City Company were, at the request of the Brooklyn Heights Company, examined by an expert selected by the Guarantee and Indemnity Company, and the terms of the lease construed by the attorneys of such company. Under the arrangement, all charges of this kind to construction are first passed upon by the directors of the Brooklyn Heights Company. They are then referred to the directors of the Brooklyn City Company, and if accepted by that company as a proper charge against construction, they pass the scrutiny of the committee acting in behalf of the note holders before payment is made. It will be seen, therefore, that the three interests involved in the making of these charges are, first, the Brooklyn Heights Company, anxious to charge to construction all expenditures that properly belong there; secondly, the directors of the Brooklyn City Company, desirous of protecting the interests of their corporation by preventing any improper charge to construction; and, thirdly, the committee representing the note holders, who must see that the investment is properly secured.

Such of these notes as have been issued have been placed upon the market at a discount of from 15 to 20 per cent. The charge against the Brooklyn City Company, however, has been the actual cost, in other words, the face of the voucher and the discount will have to be met by the Brooklyn Heights Company and cannot become a charge to the construction account of either road, under the arrangement. It would appear from this that the interests of the Brooklyn City Company are amply protected. Up to June 30, 1894, the Brooklyn Heights Company had expended on that account \$892,930.27. It has been agreed that the proceeds of the sale of old material, or such as has become useless to the company through the operation of the conversion, or of the sale of real estate no longer necessary to the company, shall either be turned over to the directors of the Brooklyn City Company to be expended by them in making extensions, shall be expended by the directors

of the Brooklyn Heights Company in extensions, or shall be applied to the reduction of the construction account created in the manner above described. All moneys received up to the date of the last annual report from the sale of horses or materials have been credited to the construction and equipment accounts of the Brooklyn City Railroad, either directly or through the contingent construction account.

The following is the contingent construction account in detail, showing the amount expended and credits to the account since January 1, 1894, including \$15,720.21 expended prior to that date:

EXPENDITURES.

For cars	\$616,540 7	L	
Electric and track construction	275,290 59)	
Depot construction and alteration	167,578 29)	
Power station construction	660,836 93	3	
Expended prior to January 1, 1894.	15,720 21		
·		\$1,735,966	7 3
CREDITS	3.		
Sale of old material	\$12,347 1	3	
Sale of horses	139,515 00)	
Credit on account dead horses	4,440 00)	
Cash advances	520,121 28	3	
-		676,423	39
Total debit		\$1,059,543	34
Deduct unpaid bills		166,613	07
Net amount Brooklyn City con-	struction ac		
count as per Brooklyn Heights			27

On September 13th the net amount of this account was \$1,875,334.85.

GUARANTEE FUND.

The following is a statement of the guarantee fund deposited by the Brooklyn Heights Company as security for the faithful performance of its contract set forth in the lease with the Brooklyn City Company. It consists of bonds of the Brooklyn City road of the par value of \$1,860,000, purchased at \$107.50, market value, \$1,999,500; \$2,000,000 first mortgage bonds of the Brooklyn, Queens County and Surburban railroad, and \$500 in cash, aggregating \$4,000,000:

Place of deposit.	Par value.		Market valu	ıe.
Kings County Trust Co.*	\$116,000	00	\$124,700	00
Franklin Trust Co.*	139,500	00	$149,\!962$	5 0
Long Island Trust Co.*	139,500	00	149,962	5 0
Hamilton Trust Co.*	139,500	00	149,962	50
Brooklyn Bank*	93,000	00	$99,\!975$	00
Long Island Bank*	93,000	00	$99,\!975$	00
People's Trust Co. 3	581,500	00	625,112	5 0
New York Guaranty and Indem-				
nity Co.*	558,000	00	599,850	00
New York Guaranty and Indem-				
nity Co., B. Q. Co. and S. bonds	2,000,000	00	2,000,000	00
New York Guaranty and Indem-				
nity Co. cash	500	00	500	00
Total	\$3,860,500	00	\$4,000,000	00
-				

The withdrawal of \$250,000 from this fund by the Brooklyn Heights Company consisted of \$233,000 of bonds from the People's Trust Company. The bonds of the Brooklyn City road have recently been sold at a premium of \$15.25, and the bonds of the Brooklyn, Queens County and Surburban are now worth \$102 at market value, therefore, notwithstanding the withdrawal of \$233,000 par of Brooklyn City bonds the deposit is worth.

	Par value.	Market value.
Brooklyn City bonds	\$1,630,000 00	\$1 ,862,275 00
Brooklyn, Queens County and		
Surburban bonds	2,000,000 00	2,040,000 00
-		
Total	\$3,630,500 00	\$3,902,775 00
=		

^{*} Brooklyn City consolidated five per cent. bonds.

FIXED INTEREST AND DIVIDED CHARGES OF BROOK-
LYN HEIGHTS RAILROAD COMPANY ON ACCOUNT OF
BROOKLYN CITY RENTAL.

\$12,000,000 capital stock at 10 per cent. per annum	\$1,200,000
\$6,000,000 Brooklyn City Railroad consolidated mortgage bonds at 5 per cent. per annum	300,000
\$200,000 Crosstown Railroad first mortgage bonds at 5 per cent. per annum	10,000
\$200,000 Calvary Cemetery Railroad bonds at 6 per cent. per annum	12,000
\$200,000 New W. and I. Railroad mortgage bonds at 7 per cent. per annum	7,500
\$200,000 Grand Street and N. Railroad mortgage bonds at 5 per cent. per annum	10,000
·	\$1,553,500

BROOKLYN CITY RAILROAD COMPANY.—STOCKS AND BONDS.

Capital stock, guaranteed at 10 per cent. per annum	\$12,000,000
Consolidated first mortgage 5 per cent. bonds, Brooklyn City Railroad, due 1941	6,000,000
Calvary Cemetery Railroad first mortgage 6 per cent. bonds, due 1907	200,000
Crosstown Railroad first mortgage 5 per cent. bonds, due 1908	200,000
New Williamsburgh and Flatbush Railroad first mortgage 7 per cent. bonds, due 1897	200,000
Greenpoint and Lorimer Street Railroad first mortgage 6 per cent. bonds, due 1910	125,000
Grand Street and Newtown Railroad first mortgage 5 per cent. bonds, due 1906	200,000
	\$8,925,000

COST OF ROAD AND EQUIPMENT.

The only portion of Mr. Thompson's criticism not already considered is that relating to the construction and equipment account of the Brooklyn City Railroad. The force of this criticism depends upon the determination of the question, what proportion of the expense of changing a road from horse power to electric power is a charge to betterment. If horse power had been continued the cost of replacing worn-out tracks and equipment should have been charged to operating expenses, as the maintenance of the electric road must now be charged. But the tracks and equipments of the horse roads that have been changed to electric power were not worn out. A new condition of things came into existence. Improved service was demanded. Increased revenues were certain to result. Stockholdrs subscribed their money to make a radical and complete change in the system of operation, and expected that their roads would earn enough to take care of the new stock and bond issues, the proceeds of which were all to be expended for construction and equipment, as well as of the stocks and bonds then outstanding, representing the cost of the road up to the time of the change. In many cases it has actually cost more to take up the old construction and put down the new The conversion from one than if there had been no old road. method to the other was not the maintenance of the horse road in any respect. The latter was to pass out of existence. place was to be taken by new rails, new equipments, a new method of transit. The earnings of the improved method have, in all cases, justified the charge of the entire cost of conversion as a betterment to the property. Wherever the horse-car tracks were found to be suitable for use under the new system, they were used, the cost of wiring, etc., being charged to construction as a betterment, and properly so. Wherever the old tracks were not suitable, they were replaced by construction much better in every way than that required for horse cars, and the whole cost charged to construction, less the amount received from the sale of useless It might be said that as the horse-car tracks would have to be kept up by charging to operating expenses, a portion

of the new construction should be charged to operating expenses. The reply is, that the track as it was would have answered for a long time to come for horse traction; that new conditions required the substitution of the new method, forcing, practically, the throwing away of the old construction.

Whenever an application has been made to your honorable board for permission to increase capital stock, in order to change motive power, the basis of such increase has been the total estimated cost of the conversion without any deduction on account of the value of the property the new construction was to replace; consequently, while the question has not been specially considuided by the board, the effect of its action in this respect and in the acceptance of the annual reports of the companies that have made such charges has been to recognize the propriety of the charges.

It is not the Brooklyn lines alone that are interested in the settlement of this question, but every surface railroad system in the State that has changed its motive power from horse to electricity. From an investigation into the subject since the completion of this examination, and an examination of the construction accounts of several of the large electric systems of the State, I find that the custom has been to charge construction and equipment with the entire cost of conversion, crediting these accounts with the moneys received from the sale of useless material. I believe this is the correct principle, and that the Brooklyn City Company acted properly in charging the total cost of its conversion to construction and equipment, and I find that all the moneys received from the sale of old material have been properly credited.

Interest and discount charged to construction.

Against the construction account of the Brooklyn City Company appears a charge of \$152,345.78, interest and discount. This amount includes an item of \$90,000, part payment of a dividend on stock, and the entire charge is criticised by Mr. Thompson. In the book of instructions entitled "Explanations for Guidance of Railroad Companies in Making Reports to Board of

Railroad Commissioners," prepared by Mr. Thompson, and issued when he was the accountant of this board, appears a direction as follows:

"All interest and discount paid in obtaining funds for construction should be charged under this heading and not prorated through the various other items."

In the blank, also prepared by Mr. Thompson, for making annual reports, this line appears, under the heading "Cost of road," viz.: "Interest and discount charged to construction." a notification to the companies reporting to this department that there could be no such thing as interest charged to construction upon money borrowed for the purpose of bettering the road, and it has been the custom of this board to accept such reasonable charges as have been made by other roads on this account without question. In the case of the Brooklyn City Company, its directors were borrowing money for construction during the period of the conversion of the road from horses to electricity, pending the issue of stocks and bonds, the proceeds of which were finally to pay for the conversion. I think, under the circumstanstances, the item of \$62,345.78 was, therefore, a proper charge. The item of \$90,000 was credited to income in the annual report for the year ending June 30, 1893. It was also debited to income as a payment of dividend, and the change in the disposition of the account was made in June, 1893, by the board of directors of the Brooklyn City Company, after an examination of the accounts by the company by the executive committee, and a full report to the board of directors, recommending a number of changes which were at that time made, and which appeared in the totals of the Annual Report to June 30, 1893. The explanation of the \$90,000 charge given by the company is, that the time the money was obtained, on account of which the interest charge was made, the company was in need of funds to continue its work of conver-The country was passing through a season of financial The company could not borrow money except on a demand loan; therefore, stock was issued which became entitled to dividends, although the construction, on account of which the

money was expended, was earning nothing. If the company could have borrowed the money it would have done so, and would have paid a comparatively small rate of interest, and the directors believed they were justified in charging to construction the difference between the amount of interest they would have paid on a loan and the dividend paid on the stock. The question raised by this criticism seems to be one of financial policy rather than one of bookkeeping, and I submit it to your board without comment.

The following is a statement of the Brooklyn City construction account:

COST OF ROAD AND EQUIPMENT TO JUNE 30, 1894.

Road-bed, superstructure and electrical appliances	\$7,988,641	66
Buildings and fixtures (all real estate)	5,969,629	75
Interest and discount charged to construction	152,345	7 8
Equipment	4,729,316	94
	\$18,839,934	13

EXPENDED DURING THE YEAR ENDING JUNE 30, 1894.

Electrical appliances pertaining to road and su-	•	
perstructure	\$1,735,030	75
Buildings and fixtures	1,395,581	26
Interest and discount charged to construction	34,726	11
Equipment	1,320,056	32

\$4,485,394 44

Expenditures on account of construction and equipment from September 30, 1889, to June 30, 1894.

YEAR.	* Cost of road.	Equipment.	Total.
1890 1891 1892 1893 1894	\$289,426 49 3,928,899 83 848,850 86 2,912,372 18 3,165,338 12	\$166,309 40 724,469 62 232,076 25 962,316 70 1,327,998 32	\$449,735 89 4,653,369 45 1,080,927 11 3,874,688 88 4,493,335 44
Totals	\$11,144,887 48	\$3,407,169 29 123,633 50	\$14,552,056 77 . 123,633 50
Expended prior to September 30, 1889	\$11,144,887 48 2,965,729 71	\$3,283,536 79 1,445,781 15	\$14,428,423 27 4,411,510 86
Grand totals	\$14,110,617 19	\$1,729,316 94	\$18,839,934 13

* Including real estate.

The construction account of 1891 includes \$4,102,734.64 paid for acquired lines, and the amount for 1892 includes \$71,087.94 expended for the same purpose. The aggregate of these items has been distributed and charged to cost of road-bed, real estate and equipment in proper proportion.

COST OF CONVERSION TO JUNE 30, 1894.

The following shows the aggregate cost of the Brooklyn system as a horse-car line and the cost of the conversion from horse to electricity up to June 30, 1894:

Total cost of construction to June 30, 1890	\$4,861,246	75
Cost of acquired horse-car lines	4,173,822	5 8
Cost, excluding cost of acquired lines, since June	\$9,035,069	33
30, 1890		80
Total	\$18,839,934	13

When the application for the increase of the capital stock of the Brooklyn City Company from \$6,000,000 to \$12,000,000 was made in 1892, the estimated cost of the expenditures on account of which the increase was asked, was \$6,908,000. As the construction progressed, it was found that much of the track then in use, which it had been assumed could be utilized, would have to be replaced by a heavier rail. An additional power house was also found necessary, and it may fairly be said that the estimate, as presented to this board, was fully 20 per cent. less than the actual cost of the work. In addition to the work contemplated in the estimate, a number of extensions have been built which have added to the total cost; and the total construction account up to September 30, 1894, including money spent by the Brooklyn Heights Company on account of the Brooklyn City construction, was \$20,915,268.98. At least a million dollars more will have to be expended before the conversion and extensions are completed. The aggregate cost of the extensions and improvements, not included in the estimate of 1892, amounted to over \$2,500,000 on June 30, 1894.

Most of the construction was done during the years 1893 and 1894, and upon the old lines operation and construction were both going on at the same time. A great deal of the work had to be done at night, and it was more expensive on that account. The report of Mr. Baxter, your engineer and inspector, which, appended to and made part of this report, shows, however, that while the conversion has necessarily been expensive, owing to the causes above enumerated and to the further fact that improvements were constantly being made in electric appliances, it has not been extravagant, and what has been done has been so well done that the company will reap the benefits of its permanency. Mr. Baxter's report will be found to more fully describe the physicial condition of the road-bed and the character of the betterments.

INCOME ACCOUNT.

The income account of the Brooklyn City Company is fully treated in connection with the analysis of the income account of the Brooklyn Heights Company.

OPERATING EXPENSES.

The table of operating expenses shows a net deficit of \$20,225.63. This is represented by the payment of obligations incurred prior to June 6, 1893, from which is deducted that part of the receipts due the Brooklyn City Company on account of service rendered prior to June 6, 1893, and not actually received until after June 30, 1893.

There is nothing further in connection with the Brooklyn City report which seems to require explanation.

Submitted herewith are the lease of the Brooklyn City railroad to the Brooklyn Heights Railroad Company, bearing date of February 14, 1893, the charter of the Long Island Traction Company, and the report of the inspector and engineer.

There is nothing to be said regarding the lease except that its conditions and requirements appear to have been fully observed by both corporations, and so far as this investigation goes, it is demonstrated that the Brooklyn City Company has received every possible protection, not only as to the preservation of its property, but in the enforcement of the rental payments by the Brooklyn Heights Company. The quarterly report of the Brooklyn Heights Company for the quarter ending September 30, 1894, shows that all money due the Brooklyn City Company on June 30, 1894, have been paid, and that full provisions has been made for future rental payments. At the time the lease was made the outstanding capital stock of the Brooklyn City Railroad Company was \$9,000,000. The total number of votes cast by the stockholders on the question of the lease was 807,797; in favor of the lease, 806,632, and against, 1,165.

BROOKLYN CITY RAILROAD COMPANY.—OFFICERS AND DIRECTORS, JUNE 30, 1894.

• Edward Merritt, president, pro tem., Brooklyn, N. Y.

Thomas P. Swain, secretary and treasurer, Brooklyn, N. Y.

Edward Merritt, Brooklyn, N. Y.

S. L. Husted, Jr., Brooklyn, N. Y.

David G. Legget, Brooklyn N. Y.

Edward D. White, Brooklyn, N. Y.

Samuel W. Powne, Brooklyn, N. Y.

George W. Bergen, Brooklyn, N. Y.

F. A. Van Iderstine, Brooklyn, N. Y.

Alonzo Slote, Brooklyn, N. Y.

Charles S. Osborne, Brooklyn, N. Y.

R. L. Edwards, Brooklyn, N. Y.

W. Cary Sanger, Brooklyn, N. Y.

John C. Barron, New York, N. Y.

BROOKLYN HEIGHTS RAILROAD COMPANY.— OFFICERS AND DIRECTORS, JUNE 30, 1894.

Daniel F. Lewis, president, 168 Montague street, Brooklyn, N.Y.

W. A. H. Borgardus, general manager, 168 Montague street, Brooklyn, N. Y.

Cyrus P. Smith, secretary and treasurer, 168 Montague street, Brooklyn, N. Y.

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J. C. Cameron, W. N. Morrison, superintendents, 168 Montague street, Brooklyn, N. Y.

Daniel F. Lewis, Brooklyn, N. Y.

E. W. Bliss, Brooklyn, N. Y.

Felix Campbell, Brooklyn, N. Y.

Crowell Hadden, Brooklyn, N. Y.

Silas B. Dutcher, Brooklyn, N. Y.

Seth L. Keeney, Brooklyn, N. Y.

David H. Valentine, Brooklyn, N. Y.

Henry D. Polhemus, Brooklyn, N. Y.

W. S. Sloan, New York City.

A. Abraham, Brooklyn, N. Y.

Frank Bailey, Brooklyn, N. Y.

SUMMARY.

In summarizing the result of this examination, I most respectfully report:

First.— That the Long Island Traction Company is not a corporation required to make reports to your board. It is true that the collateral trust notes indorsed by the Long Island Traction Company, on account of the Brooklyn City construction are a liability ahead of the stock of the Long Island Traction Company, and they should be. Whatever value in connection with its ownership of the stock of the Brooklyn Heights Company the Long Island Traction Company's stock may have, will be based upon the earnings of the Brooklyn City Company, and the greater the improvement in the Brooklyn City property the larger will be its earning power and the more speedily will the Long Island Traction Company be enabled to realize upon its investment in connection with this property.

Second.—The accounts of the Brooklyn Heights Company are correct, and properly set forth the transactions of that company. The terms of agreement with the Brooklyn City Company have been fully and faithfully complied with, and at the time of this examination all amounts due the Brooklyn City Company had been paid.

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Third.—The money obtained by the Brooklyn City Company from the sale of its stock and bonds, for the purpose of changing the motive power of its road from horses to electricity, has been properly expended and charged to the proper accounts. These accounts have received full credit for the sale of all useless material and the relations with the Brooklyn City Company with the lessee company have been controlled in all respects by the terms of the lease. The small amounts of difference between the income accounts of the Brooklyn City and the Brooklyn Heights Companies, growing out of the confusion incident to the changes in operation and the different systems of bookkeeping, the amount of which is \$281.03, have all been fully explained.

Fourth.— Relative to the inadequacy of the present blank upon which the reports of street surface railroads are required to be made to your honorable board, I would respectfully recommend a conference of the accountants of the street surface systems of the State, under the auspices of this board, to the end that such changes be made in the form as will meet present requirements. Also, that at the same time an effort be made to secure greater uniformity in the methods of accounting on the part of these companies.

All of which is respectfully submitted.

CHARLES R. DEFREEST,

Secretary.

ACTION OF THE BOARD.

After the reading and consideration of the foregoing report, the following resolution was unanimously adopted by the board:

Resolved, That the report of the secretary of this board, in relation to the Brooklyn City and Brooklyn Heights Railroad Companies and the Long Island Traction Company, be and the same is hereby accepted, and its conclusions and findings concerning the accounts of these companies approved.

APPENDIX.

REPORT OF F. K. BAXTER, INSPECTOR.

Hon. Charles R. Defreest, Secretary State Board of Railroad Commissioners, Albany, N. Y.:

Dear Sir.—Agreeable to your request, a careful examination of the physicial condition of the Brooklyn City Railroad Company, now operated by the Brooklyn Heights company, has been made, and the following is most respectfully submitted:

The power stations were first visited. There are three in active operation, as follows: The eastern, which is the largest, and is located at the corner of Kent and Division avenues; the southern, at the foot of Fifty-second street; and the Ridgewood station, on Wykoff avenue, near Myrtle avenue. An unused station, at the corner of Second avenue and Fifty-second street, is now for sale. Your inspector, in the inspection of these stations, found everything modern, material and workmanship of the best, and the machinery all in perfect running order, stable and permanent. method of handling coal is very economical. The appliances all appeared of modern construction and well cared for. The structures were also found well and durably made. The E. P. Allis Company, of Milwaukee, Wis., had furnished the engines, and these were found working smoothly, and without the vibration usual in many instances. The electric generators were in extra good condition, and installed with all the latest and improved devices for the control and regulation of the machines and their current out put. Protection from the effects of lightning and short circuits from any cause were noted in each instance. Great care has been taken in the foundation construction, concrete and granite being used in large quantities with Portland cement. bility is apparent everywhere, even in minor parts. Room was noted in each station for additional power if needed in the future. The boiler batteries were found in excellent condition, and ample room for additions were noted.

It is somewhat difficult to compare the cost of power generated in power stations in different parts of the country. The variation No. 98.] 1861

in the size of cars, difference in size, efficiency and number of motors used for cars, difference in grades over which cars are propelled, and the different percentage of loss in the transmission of power from the power stations to the cars are some of the hardest factors to overcome and equalize. The unit of comparison which is used generally is the cost of power per car per mile. If the ampere hour unit at the station was used, many of the difficulties would disappear, as this unit does not vary. The cost per car per mile for the last six months upon this system reached as low as one and one-tenth cents, and has not been above one and twenty-five hundredths cents. The nominal horse-power of the three stations reaches close to 17,000. The maximum capacity would considerably exceed this easily.

The overhead work was carefully noted upon all the lines, and was found as desirable as could be expected. The wires were taut. of ample size, well and securely connected and carefully attended Guard wires were found up in all instances where there was a possibility of other wires falling upon the trolley wires. poles were found of extra material, well and securely set in the ground and all strongly maintained. The trolley wires are of hard drawn copper, No. 10 B. and S. gauge. The span wires, supporting the trolley wires, are of galvanized iron, and are insulated from the trolley wires and from the poles. The copper "bonds" which connect the rails are bonded to supplementary wire running parallel to the rails the entire length of the line. The arrangement of the return current cables and feed system were found complete and in extra condition and very well cared for. The matter of electrolysis has been also well cared for, and the near future will no doubt see this troublesome feature entirely elimi-Repair gangs were noted upon days of inspection and appearances indicated close attention upon every line. This system, the second largest in the world (the Boston West End Company being the largest), has some 200 miles of single track. Most of the lines have double tracks which greatly facilitates the traffic. In addition to the main trackage there are 109 crossovers, averaging 60 feet each, making total of 6,540 feet. A careful inspection of the tracks upon each of the lines showed excellent state of maintenance. The different kinds of rail in use are as follows: Lewis & Fowler box girder, 5 inches high and weighing 65 pounds per yard; 9-inch girder, twelve bolts per joint; center-bearing or horse car rails; side-bearing rail; steam rail, T-form and Johnson 6-inch girder rail. The surface and adjustment of tracks were noted very good, showing constant attention and care. ments adjacent to the tracks and between them are, as a rule, in good condition upon each of the lines. The lines extending to the suburbs were noted paved and exceptionally cared for. The new 9-inch girder rail recently laid upon Fulton street became necessary owing to increased traffic. Several of the lines will, the coming season, be laid with this heavy "section." The car repair shop upon Fifty-second street was found in permanent condition, Nearly all repairs are and the outfit there is quite complete. made there, and all cars equipped, some 1,600 in number. change from horse power to electricity, upon the 24 lines, was made from May, 1891, to September, 1894.

The company owns 42 parcels of real estate upon which are located, with few exceptions, car houses, stables, shops, transer stations, etc. Each of the buildings was examined and found well cared for, and of good construction, a number being of stone and brick. The area of the above parcels range from 1,875 square feet to 229,561 square feet. This class of property generally is closely watched and maintained, as its great value deserves. In round numbers, this company has 800 closed and 800 open cars. The general condition of the cars was found very good. The motors' running parts, and cars proper, receive daily inspection, and repairs are made, whenever needed, without delay.

The dummy lines were inspected and found in good condition, as regards track, road-bed and the like. Your inspector was informed that these lines will, in the near future, be modified to electric power. Calculations show that the power stations are together capable of operating 425 miles of single track, with all the cars required, which will not be less than about 1,650 per day, without laying another brick or any other work, excepting, perhaps, the addition of four engines, eight batteries of boilers and six generators, the foundations for which are already erected and pro-

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vided for. Since the erection of the eastern station, this company has furnished the Brooklyn, Queens County and Surburban Railroad Company with power. With machinery added, as above referred to, the stations will run the Brooklyn Heights system, the system of the Brooklyn, Queens County and Surburban Railroad, and 173 miles of extensions, when completed, which are owned by the above named companies. In conclusion your inspector would say that the whole system, in its physical conditions, shows intelligent maintenance, modern construction, and proper safety on the various track surfaces.

Very respectfully,

F. K. BAXTER,

Inspector.

Dated Albany, N. Y., December 11th.

COMPLAINT OF H. M. THOMPSON.

NEW YORK, October 15, 1894.

To the Honorable Board of Railroad Commissioners of the State of New York, Albany, N. Y.:

GENTLEMEN.—The Long Island Traction Company is a corporation formed under the laws of West Virginia, with a capital of \$30,000,000 which was issued at fifteen (15) cents on a dollar, or \$4,500,000.

The Brooklyn Heights Railroad Company is a corporation formed under the Laws of the State of New York, April 1, 1887, and owns a railroad one-half mile long in the city of Brooklyn. The capital stock of this company, amounting to \$200,000, is owned or controlled by the Long Island Traction Company. It had also a bonded debt of \$250,000.

The Brooklyn City Railroad Company is a corporation formed under the Laws of the State of New York, December 17, 1853, and owns a system of railroads 95½ miles long in the city of Brooklyn, and has a capital stock of \$12,000,000 and a bonded debt of \$6,925,000. This railroad, together with all equipment, real estate, etc., is operated by the Brooklyn Heights Railroad Company under a lease bearing date February 14, 1893.

The Long Island Traction Company, I am informed, has never made any report to your board.

The Brooklyn Heights Railroad Company, as owner and lessee, and the Brooklyn City Railroad Company, as owner and lessor, have made reports to your board for the fiscal years ending June 30, 1893 and 1894.

I am a stockholder in the Long Island Traction Company, and the purpose of this communication is to present to you certain objections to these reports, which are as follows:

REPORT OF BROOKLYN HEIGHTS RAILROAD COMPANY, JUNE 30, 1894.

Page 7. Rentals paid, \$1,434,941.50. No details to show what is included in this, and it is at variance with page 7 of the Brooklyn City Railroad Company's report as to rentals received. All other fixed charges differ in large amounts, and the difference seems too large in taxes to be accounted for by taxes paid on property of the Brooklyn Heights Railroad Company proper.

Page 9. Renewals of horses, \$11,160. As the horses on hand June 30, 1893, page 722 of 1893 report of Railroad Commissioners numbered 4,648, few, if any, purchases were necessary to finish up the operation by horse power, therefore the 4,648 horses leased must have been sold or worn out, and no expenditure of capital was necessary to keep up stock; that being so, this account should be charged with a certain depreciation from invoice price, or else large earnings would be derived from motive power, which costs nothing.

Page 9. Trucking credit, \$139,311.39. What item in operating expenses was this amount charged to that it should be credited to operating expenses? What account was it debited to to balance this credit, and for what reason?

Page 9. Repairs road-bed, etc., \$141,570.53. Does this contain any of the cost of changing road from horse to electric power, or was that all charged to Brooklyn City Railroad construction account? It certainly is a very large expenditure for repairs of a road, the larger part of which had been paid out about one year,

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and the cost of which was so large as to warrant the belief that it was an extraordinarily well-built road, and that no repairs of consequence would be required for at least five years.

REPORT OF BROOKLYN CITY RAILROAD, JUNE 30, 1894.

Page 5. Interest charged to construction, \$152,345.78, \$117,-619.67 of which is in 1893 report, page 720 of Railroad Commissioners' report. This is not a proper charge here, but should be charged against income. There was plenty of capital stock and bonds on hand, and money was borrowed to save interest, as the loans could be obtained at 4 and 5 per cent., while dividends on the stock would have been 8 per cent. Certainly, if the stock and bonds had been issued, dividends on stock and interest on bonds would not be a proper charge to construction. No such practice obtained with this company in former years. All payments of interest on floating debt were charged against income, and would have been in this instance had not my figures been reversed. In the report to your board for quarter ending September 30, 189, made by me as secretary and treasurer, I charged against income an estimated amount for that quarter for interest on loans. the report for quarter ending June 30, 1893, made under oath by my successor in office (Mr. Bogardus), my charges were reversed by saying "improperly estimated," but no explanation was offered as to why, and as I made my report under oath, and still adhere to the correctness of that report, I respectfully request that your honorable board take measures to set this matter right.

In report of June 30, 1893, page 721 of the Railroad Commissioners' report, \$90,000 is credited to income for interest on stock issued for construction. If this credit is proper, the debit should be against income as well.

Page 6. Reconstructing roadbed, etc., \$1,184,557.29, and for same purpose in 1893 report, page 721 Railroad Commissioners' report, \$1,044,511.90. Altering depots, \$117,012.75. Altering horse cars into electric cars, \$327,372.02. Was any proportion of these kinds of expenditures charged to operating expenses? In the above payments for reconstructing road-bed, is there included

any payments for repairs of tracks after rails were laid? road was fully constructed and equipped before the change from horse to electric power, and the cost thereof charged to construction and equipment paid for from proceeds of stock and bonds, it is not proper under a simple change of the motive power to charge the entire cost thereof to construction and equipment. If horse power had been continued, the cost of relaying worn-out tracks and replacing worn-out equipment would have been charged to operating expenses as repairs, the company having earned its: profits out of the capital originally invested. Therefore, capital account should be charged only with betterments of the new road over the old, and all new work pertaining to electric traction exclusively, and the balance should be charged against earnings as repairs. As to repairs of rails after laying; to charge maintenance to construction account is so much water, and when you inventory road, you will find construction account debited with more than inventory, if everything is taken at cost. Road once constructed and equipped must be kept up to cost by repairs charged to operating expenses, but if renewals and rebuilding are charged to construction, that account will finally be debited with more cost than stock outstanding, and if stock is increased to balance that, an inventory of road and equipment will show prices paid double of what it could have been furnished for, and stockholders will find that they do not own as much property as they had been led to believe by published reports.

Page 7. Rentals, fixed charges, dividends, etc., do not correspond with payments by Brooklyn Heights Railroad Company. The rental should be credited in full, and the payments would balance it, and the deficit of \$812,041.94 should not appear, as on page 1 it gives terms of lease to be payments of fixed charges, dividends, interest, etc.

About August, 1892, your board granted to the Brooklyn City Railroad Company an increase of its capital stock from \$6,000,000 to \$12,000,000, at which time there was filed with you an estimate of the cost of changing the motive power which, under a liberal allowance, was less than \$7,000,000. There was then \$3,000,000

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of the first mortgage bonds unissued, which were reserved in most part for any needed extensions. The stock was placed at par, producing \$6,000,000; the bonds were placed at a premium and produced \$212,916 (as per report), and there has been taken from the guarantee fund of the Long Island Traction Company \$250,000 and collateral trust notes have been issued, as I am informed, for \$3,000,000, making an amount of capital produced of \$12,462,916. In addition, horses have been sold for quite an amount.

What the exact expenditure has been on account of construction and equipment I am unable to say, but if the item for interest on loans, now charged to construction, be transferred to the debit of income, where, I claim, they properly belong, and if there be proportions of the cost of changing motive power, and charges for repair of rails to be credited to construction and equipment and debited to income, which an examination of the books will decide, then there will be a material correction to be made in the income account of this property, as shown in the reports.

When the Long Island Traction Company was formed, the stockholders of the Brooklyn City Railroad Company were invited to invest in its stock, it being represented that the lease of the Brooklyn City Railroad Company system would be very profitable, and there were other securities held by the company which were a further guarantee that the investment was a good one. Under date of September 5, 1894, the directors of the Long Island Traction Company issued a circular to its stockholders stating that more money was needed, and collateral trust notes for \$3,000,000 had been created, secured by an assignment of all its rights, title and interest in these securities. These notes were payable in three years, with interest at 6 per cent., and were to be floated at a discount of from 15 to 20 per cent. This scheme, as presented, subordinates the stockholders to the noteholders, and the former must be satisfied with the usual estimate of future profits, while the management will be controlled by three persons, to act as trustees, and to whom is to be assigned the voting power on the stock of the lessee, the Brooklyn Heights Railroad Company, until the notes are paid.

In view of the foregoing, I respectfully request that your honorable board order an investigation of the accounts and affairs of these companies, to the end that those who are interested may know the actual condition of the property.

Very respectfully,

(Signed)

H. M. THOMPSON,

26 Cortlandt Street, New York.

ANSWERS TO THE COMPLAINT.

LONG ISLAND TRACTION COMPANY.

Brooklyn, N. Y., November 10, 1894.

To the Honorable Board of Railroad Commissioners, Albany, N. Y.:

Gentlemen.— Your favor of the 30th ultimo, containing a complaint of H. M. Thompson, against the Brooklyn Heights Railroad Company, the Brooklyn City Railroad Company and the Long Island Traction Company, has had careful consideration. The reply thereto on the part of the Brooklyn Heights Railroad Company has been forwarded to-day. The Long Island Traction Company is a corporation organized under the laws of the State of Virginia, and is not a railroad corporation. We are, for this reason, under the impresion that you will not care to take up the examination of the books and accounts of that company, particularly as the books of the Brooklyn Heights and Brooklyn City companies will furnish a complete answer to the charge made.

Yours very respectfully,

(Signed)

DANIEL F. LEWIS,

President.

BROOKLYN CITY RAILROAD COMPANY.

November 9, 1894.

To the Honorable Board of Railroad Commissioners, Albany, N. Y.:

Gentlemen.— Your favor of the 30th ultimo, addressed to Daniel F. Lewis, president of the Brooklyn Heights Railroad Company, containing a copy of the complaint of Henry M. Thompson against the Brooklyn Heights Railroad Company, the Brooklyn

City Railroad Company and the Long Island Traction Company was referred to us by Mr. Lewis, and the complaint has been carefully considered.

So far as the complaint relates to the accounts of the Brooklyn City Railroad Company, we believe that the accounts of that company are correct, and that the claims of the complainant in criticism of those accounts are absolutely untenable and unfounded.

If you desire to verify this, we request that you will appoint a representative from your board to make such examination of our books and accounts as you may deem desirable, and so assure yourselves of their correctness, and we further request that such examination be made as soon as possible.

Yours respectfully,

THE BROOKLYN CITY RAILROAD COMPANY,

(Signed)

EDWARD MERRITT,

President.

BROOKLYN HEIGHTS RAILROAD COMPANY.

November 10, 1894.

To the Honorable Board of Railroad Commissioners, Albany, N. Y.:

GENTLEMEN.— Your favor of the 30th ultimo, containing a copy of complaint of H. M. Thompson against the Brooklyn Heights Railroad Company, the Brooklyn City Railroad Company and the Long Island Traction Company is at hand and contents carefully noted.

It is not practicable to make a written answer to the complaint in order to do this subject justice; and to satisfy your honorable board of the correctness of the charges of the said Thompson, and of the propriety of the manner in which our business has been conducted, including the accounts of the company, we would respectfully request that you appoint a representative from your board to make such examination of the books, accounts and property of the company as you might deem wise and proper, and in that way secure for yourselves an intimate knowledge of the affairs of the company, and also satisfy yourselves of the correctness of its accounts. We urgently request that such examination be

made at the earliest possible date. Regarding the reference to the Brooklyn City Railroad Company's accounts in your said favor of the 30th ultimo, and the request for an answer from that company, I would state that you will receive a separate reply from them.

Yours very respectfully,

(Signed)

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DANIEL F. LEWIS,

President.

LONG ISLAND TRACTION COMPANY AND THE BROOKLYN HEIGHTS RAILROAD COMPANY TO NEW YORK GUARANTY AND INDEMNITY COMPANY, TRUSTEE.

TRUST INDENTURE.

(Dated August 1, 1894.)

This indenture, made this 1st day of August, 1894, between the Long Island Traction Company, a Virginian corporation, hereinafter called the "Traction Company," and the Brooklyn Heights Railroad Company, a New York corporation, hereinafter called the "Heights Company," parties of the first part, and the New York Guaranty and Indemnity Company, a New York corporation, hereinafter called the "Trustee," party of the second part, witnesseth:

Whereas, The Heights Company is the lessee named in a certain indenture of lease, dated February 14, 1893, whereby the Brooklyn City Railroad Company, as lessor, demised and leased unto the Heights Company and its successors all and singular the certain railroad and other property of said lessor in said indenture of lease mentioned and described; and,

Whereas, All of the capital stock of the said Heights Company is owned by the Traction Company, one of the parties hereto of the first part; and,

Whereas, The Heights Company has expended large sums of money in and about the electrical equipment and reconstruction of said demised railroads and for other purposes, and has contracted debts in and about the premises; and,

Whereas, The Traction Company and the Heights Company, for the purpose of providing means for the payment of the indebtedness so contracted as aforesaid, and for other purposes, desire and have respectively duly resolved to issue, negotiate and dispose of their joint and several promissory notes, secured by indenture of trust and the pledge of securities and property as collateral as herein provided, and to that end have respectively duly authorized the execution and delivery of this instrument and the execution, delivery and issue of said notes, the said joint and several promissory notes to amount in the aggregate to not exceeding \$3,000,000, consisting of registered notes, and of coupon notes with privilege of registration of principal; all of the said notes to be of the denomination of \$1,000 or less, or multiples of \$1,000, to bear interest at the rate of 6 per centum per annum, payable semi-annually, dated July 31, 1894, and payable in three years after date, or sooner, at the option of the Traction Company and of the Heights Company, after July 31, 1895. All of the said notes of each class to be of the same tenor and date, and each of the said notes to be signed by the president or vice-presidents of the Traction Company and the Heights Company, and to bear the corporate seals of the Traction Company and the Heights Company, attested by their respective secretaries, and the said notes to be of substantially the following form and tenor, that is to say:

(Form of registered notes.)

UNITED STATES OF AMERICA.—LONG ISLAND TRAC-TION COMPANY AND THE BROOKLYN HEIGHTS RAIL-ROAD COMPANY.

No.

Six per cent. collateral trust gold note.

NEW YORK, August 1, 1894.

The Long Island Traction Company and the Brooklyn Heights Railroad Company, for value received, hereby promise, jointly and severally, to pay to the registered holder hereof, at the office of the New York Guaranty and Indemnity Company, in the city of New York, dollars in gold coin of the United States, of or

equal to the present standard of weight and fineness, on the 1st day of August A. D. 1897, unless the same be sooner paid as hereinbelow provided, and to pay interest thereon to the registered holder hereof at the office aforesaid, at the rate of 6 per centum per annum, in like coin, from the date hereof, semi-annually, on the first days of February and August in each year until said principal sum shall be fully paid; and it is hereby agreed that in case the interest or any part thereof shall not be so paid on any day when the same is due and payable, and shall remain in arrears three months after the same shall have been demanded, then the whole of said principal sum may become immediately due and payable, in the manner and with the effect provided in the indenture of trust hereinafter mentioned.

This note is one of a series consisting of registered notes, and of coupon notes, with the privilege of registration of principal, amounting in the aggregate to not exceeding \$3,000,000; all the said notes being of the denomination of \$1,000 or less, or multiples of \$1,000, and all of the said notes of each class being of the same tenor and date, and all the said notes, as well registered as coupon, being equally secured by a pledge of certain assets and property of the above-named Traction and Heights Companies, as provided in a certain indenture of trust bearing even date herewith, made by the said Long Island Traction Company and the said Brooklyn Heights Railroad Company with the New York Guaranty and Indemnity Company, as trustee, subject to the terms and conditions of which said indenture of trust this note is issued and held.

This note is not valid or obligatory until the certificate hereon shall have been signed by the trustee under said indenture of trust.

This note is redeemable at par and accrued interest before maturity, on or at any time after the 31st day of July, A. D. 1895, upon the conditions and in the manner set forth in the said indenture or trust.

It is agreed by the holder of this note that no recourse shall be had for its payment to the individual liability of any stockholder, director or officer of the above-named Traction or Heights Companies.

This note is transferable in person or by attorney only on the books of the trustee under the said indenture, upon surrender of this note duly indersed.

In witness whereof, the said Long Island Traction Company and the Brooklyn Heights Railroad Company have caused their respective corporate seals to be hereto affixed and attested by their respective secretaries, and these presents to be signed by their respective presidents.

LUNG ISLAND TRACTION COMPANY,	
Ву	 ,
	President.
Attest:	
Secretary.	٠
BROOKLYN HEIGHTS RAILROAD COI	MPANY,
Ву ——	 ,
Attest:	President.
Secretary.	
sourceury.	

New York Guaranty and Indemnity Company hereby certifies that the within note is one of the series and issue described in the indenture of trust therein mentioned.

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(Trustee's certificate.)

NEW YORK GUARANTY AND INDEMNITY COMPANY,

	Trustee.
Ву	, _
	President.

[Assembly, No. 98.]

(Form of coupon notes.)

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UNITED STATES OF AMERICA.—LONG ISLAND TRAC-TION COMPANY AND THE BROOKLYN HEIGHTS RAIL-ROAD COMPANY.

Six per cent. collateral trust gold note.

NEW YORK, August 1, 1894.

The Long Island Traction Company and the Brooklyn Heights Railroad Company, for value received, hereby promise jointly and severally to pay to the bearer, or if this note be registered, then to the registered holder hereof, at the office of the New York Guaranty and Indemnity Company, in the city of New York dollars in gold coin of the United States, of or equal to the present standard of weight and fineness, on the 1st day of August, A. D. 1897, unless the same be sooner paid as hereinbelow provided, and to pay interest thereon at the rate of 6 per cent. per annum, in like coin, from the date hereof, semi-annually, on the 1st days of February and August in each year until said principal sum shall be fully paid, upon presentation and surrender at the office of said New York Guaranty and Indemnity Company, of the interest coupons hereto annexed, as the same become due respectively.

And it is hereby agreed that in case the interest, or any part thereof, shall not be so paid on any day when the same is due and payable, and shall remain in arrears three months after the same shall have been demanded, then the whole of said principal sum may become immediately due and payable in the manner and with the effect provided in the indenture of trust hereinafter mentioned.

This note is one of a series consisting of registered notes, and of coupon notes, with privilege of registration of principal, amount-

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ing-in the aggregate to not exceeding \$3,000,000; and all the said notes being of the denomination of \$1,000 or less, or multiples of \$1,000; all of the said notes of each class being of the same tenor and date, and all the said notes, as well registered as coupon, are equally secured by a pledge of certain assets and property of the above-named Traction and Heights Companies, as provided in a certain indenture of trust bearing even date herewith, made by the said Long Island Traction Company and said The Brooklyn Heights Railroad Company, with the New York Guaranty and Indemnity Company as trustees, subject to the terms and conditions of which said indenture of trust, this note is issued and held.

This note is not valid or obligatory until the certificate hereon shall have been signed by the trustee under said indenture of trust.

This note is redeemable at par and accrued interest, before maturity, on or at any time after the 31st day of July, A. D. 1895, upon the conditions and in the manner set forth in the said indenture of trust.

It is agreed by the holder of this note that no recourse shall be had for its payment to the individual liability of any stockholder, director or officer of the above-named Traction or Heights Companies.

This note may be registered in the name of the owner in a book to be kept by the treasurer under said indenture of trust, which registration shall be noted hereon, after which every transfer hereof shall be valid only when made on said books, until so transferred again to bearer. The coupons shall always be transferable by delivery.

In witness whereof, the said Long Island Traction Company and the said Brooklyn Heights Railroad Company have caused their respective corporate seals to be hereto affixed and attested by their respective secretaries and these presents to be signed by their respective presidents, and have also caused fac-simila signatures of their respective treasurers to be engraved on each of the interest coupons hereto annexed.

LONG ISLAND TRACTIC	ON COMPANY,
•	Ву,
Attest:	President.
Attest:	
Secretary.	•
BROOKLYN HEIGHTS 1	RAILROAD COMPANY,
·	Ву,
	President.
Attest:	
 ,	
Secretary.	
, (Co	upon.)
road Company will pay to the New York Guaranty and Inden York,	ny and the Brooklyn Heights Railbearer hereof, at the office of the unity Company, in the city of New ited States gold coin, on the , for six months' interest on their TREASURER, B. H. R. R. CO. TREASURER, L. I. T. CO.
(Trustee's	s certificate.)
_	demnity Company hereby certifies ne series and issue described in the tioned.
NEW YORK GUARANTY AN	ID INDEMNITY COMPANY.
`	Trustee.
	Ву ———.
	President.

Now, therefore, the Traction Company and the Heights Comany, in consideration of the premises and of the sum of \$1 to each of them in hand paid by the trustee, the receipt whereof is by each hereby acknowledged, and in order to secure equally the payment of the principal and interest of the notes aforesaid, at any time outstanding, do hereby severally and respectively grant, bargain, sell, assign, transfer, set over and deliver to the trustee and its successors, and do hereby pledge and hypothecate, simultaneously with the execution of these presents, the following described personal property, that is to say:

- 1. All the right, title and interest which Long Island Traction Company now owns or may hereafter acquire in and to the entire capital stock of the Brooklyn Heights Railroad Company, consisting of 2,000 shares of the par value of \$100 each.
- 2. All dividends, income, interest and increase to which the Long Island Traction Company now is or may hereafter become entitled by reason of its right, title and interest in and to the entire capital stock of the Brooklyn, Queens County and Suburban Railroad Company, which said right, title and interest is, however, subject to be diverted to and invested in the Brooklyn City Railroad Company in the contingency mentioned in a certain tripartite agreement made and executed by and between said Long Island Traction Company, said Brooklyn, Queens County and Suburban Railroad Company and the Brooklyn City Railroad Company, dated January 16, 1894.
- 3. All net profits of or in any wise derived or receivable by said Heights Company, as lessee as aforesaid of the railroad and other property of the Brooklyn City Railroad Company, under the above-mentioned lease of February 14, 1893, including and intending to include all the present and future right, title and interest of the Heights Company and the Traction Company in, to and in any wise concerning the income and principal and every part thereof of the certain guaranty fund of \$4,000,000 in said lease mentioned and now established thereunder.
- 4. All the right, title and interest of the Heights Company in and to the amount of the cost of all property, extensions, branches, additions, improvements and equipments heretofore and hereafter

made, acquired and paid for by said Heights Company out of its own funds, for use in connection with the operations of the railroads of the Brooklyn City Railroad Company, less the cost of such part thereof as shall or may be required to preserve said railroads, extensions, branches, additions, improvements and equipments in good repair and serviceable condition during the existence of the lease hereinbefore mentioned from said the Brooklyn City Railroad Company, as lessor, to said Heights Company, as lessee, and less the cost of such part thereof as shall or may be necessary to preserve and secure efficiency in the operation of such railroad; such cost, as aforesaid, being payable, under the terms of the lease above mentioned by said lessor company, to said lessee company, in the event of the expiration of said lease or other sooner termination thereof.

To have and to hold the said above-described securities and property to the said trustee, its successor and successors forever. In trust, nevertheless, (subject to each and all of the provisions hereinafter in this indenture of trust contained), for the equal prorata benefit, security and protection of the several persons and corporations who shall form time to time sell the said notes or any of them, and for the enforcement of the payment thereof and of the interest due thereon when payable, in accordance with the true intent and meaning of the stipulations, covenants, terms and conditions of this instrument and of said notes.

Provided, however, and these presents are upon the express condition that if the Traction Company and the Heights Company, or either of them, their successors or assigns, shall well and truly pay or cause to be paid unto the holders of the said notes so issued or to be issued as herein provided the sums of money constituting the principal of said notes, and the interest to grow due thereon, at the times and in the manner mentioned in the said notes, according to the true intent and meaning thereof, or shall redeem said notes as herein provided and shall well and truly keep, perform and observe all and singular the covenants, promises and conditions in said notes and in this indenture of trust expressed to be by said Traction and Heights Companies kept, performed and

observed, then these presents and the rights hereby granted shall cease, determine and be void, otherwise to be remain in full force and virtue.

It is hereby agreed and declared by and between the parties hereto, that the further trusts, uses, purposes, conditions and covenants for and upon which the shares of stock and other property hereinbefore mentioned and described are assigned, transferred, delivered and pledged and hypothecated to and to be held and disposed of by the said trustee are as follows, that is to say:

ARTICLE FIRST.

Upon the execution of this indenture and the transfer and delivery of the trustee hereunder of the certificate or certificates for not less than nineteen hundred and eighty-seven of the shares of stock of the Brooklyn Heights Railroad Company, the trustee shall certify and deliver, or upon the joint order of the Transaction Company and Heights Company collateral trust notes of the issue hereby secured, to the amount of \$1,875,000 par value. The remainder of said notes shall be held by the trustee and be certified and delivered by it hereafter as directed by a disbursing committee to be appointed by the Traction Company and the Heights Company, with the approval of the president of the New York Guaranty and Indemnity Company and of the president of the Brooklyn City Railroad Company. The trustee shall in no wise be called upon to look behind any such direction of said committee or to the subsequent or final disposition made of any of the notes hereby secured which may be certified and delivered in accordance therewith. No note or notes intended to be secured hereby shall be so secured or be valid for any purpose until certified by the trustee.

Any note or notes aforesaid of either class hereby secured whether registered or coupon, may be surrendered for the purpose of being cancelled and exchanged for a note or notes of the same or the other class, and such exchange may be made accordingly, provided the note or notes so to be issued in exchange shall not exceed in its or their principal or aggregate principal the principal or aggregate.

gate principal of the note or notes so surrendered, so that the total aggregate amount in principal of all the notes outstanding at any one time shall not exceed said aggregate sum of \$3,000,000.

ARTICLE SECOND.

The Traction Company and the Heights Company jointly and severally agree that they will, from time to time, do or cause to be done all such acts and will execute or cause to be executed all such instruments as shall be necessary or proper to carry into effect the purposes and intent of this indenture and will make such further transfers and assurances to the trustee as may, from time to time, be necessary or proper to vest in the trustee all of the shares of stock and other property assigned and pledged hereby or hereunder and lastly, will pay promptly as it matures the interest on the notes hereby secured, as provided in said notes, and also the principal of said notes at maturity.

ARTICLE THIRD.

The trustee shall collect and receive all dividends upon the shares of stock of the Brooklyn Heights Company pledged hereunder, and also all dividends, income and increase to which the Traction Company is, or may hereafter become entitled by reason of its right, title and interest in and to the capital stock of the Brooklyn, Queens County and Suburban Railroad Company, and also all net profits, of or in any wise derived or receivable by the Heights Company as lessee of the railroad and other property of the Brooklyn City Railroad Company, including all interest so hereinafter receivable upon the certain guarantee fund established by the Heights Company as such lessee. The trustee shall and may, from time to time, execute such orders or instruments as it may deem necessary or proper in order to the due collection of the interest and other moneys mentioned in this article. moneys collected and received by the trustee under this article shall be by it applied first toward the payment of interest upon the collateral trust notes, outstanding at the time of the issue hereby secured. The balance shall be held by the trustee until applied, under the direction of the Traction Company and of the Heights Company, in the exercise of the option of the parties hereto of the first part, as in article sixth hereinafter provided, to the payment of the principal of notes of the issue hereby secured. Notes whereof the principal is so sought to be paid, shall be drawn by lot and the payment and cancellation thereof be effected in manner as in article sixth hereof provided.

ARTICLE FOURTH.

All certificates for shares of stock of the Brooklyn Heights Railroad Company received hereunder shall be kept by the trustee in some safe deposit vault or other place of safety, and may be transferred to or registered in the name of the trustee or its nominee or nominees, approved by the Traction Company. But the trustee shall, from time to time, as and when requested by the Traction Company, transfer or permit to be held shares of said stock to an amount sufficient to qualify directors of said the Brooklyn Heights Railroad Company.

ARTICLE FIFTH.

The voting power upon the shares of stock of the Brooklyn Heights Railroad Company pledged hereunder shall, until payment of the principal and interest of the collateral trust notes issued and secured hereby and hereunder, be exercised by a committee composed of Messrs. Martin Joost, Thomas S. Moore, and Joseph S. Auerbach, who are hereby, for such purpose, duly appointed, authorized and empowered by the Traction Company, one of the parties hereto of the first part. Such voting power shall be exercised by the above named three persons and their successors or substitutes constituting such committee, personally or by proxy, and in case the said shares of stock of the Brooklyn Heights Railroad Company shall, at any time hereafter, be transferred by or on behalf of the trustee unto any person or corporation other than the Traction Company, than the trustee hereunder shall make and execute or procure and deliver, such proper proxies or powers of attorney as shall empower and enable the above named three persons and their substitutes, survivors and

successors, constituting such committee or their designated representative or representatives, to vote upon the said shares of stock of the Brooklyn Heights Railroad Company at all times, so long as any of the collateral trust notes hereby secured remain outstanding and unpaid, as fully and to the same extent and with the same effect as if this indenture had not been executed and said shares of stock continued to be voted by, or as directed by, the Traction Company; subject only to the provisions with respect to such voting power hereafter in this article contained. voting power shall at no time be used or exercised so as to permit or authorize any increase of the capital stock of said the Brooklyn Heights Railroad Company or any lien, security or charge to be created or imposed upon its property or franchises unless such exercises of such power be specially authorized by the consent in writing of the owners of a majority in value of the collateral trust notes secured hereby and at the time outstanding, and then only in such manner and to such extent as shall be specified in such consent. The three persons above named, and their survivors and successors, constituting the voting committee, may attend and vote at any and all meetings of the stockholders of said the Brooklyn Heights Railroad Company, in person or by The majority of the committee shall control and no proxy shall be valid unless executed by a majority of the persons constituting the committee at the time. Any vacancy occuring in the voting committee (as now or hereafter constituted), by death, resignation, refusal or incapacity to act, or from any other cause. shall be filled by the other members of said commmittee. power of the voting committee to vote on the shares of stock of said the Brooklyn Heights Railroad Company shall terminate immediately upon the payment in full of the principal and interest of the collateral trust notes secured hereby, or upon the enforcement, with respect to said shares, of the lien of this indenture. Such voting power may also be sooner terminated with the consent in writing of the holders of two-thirds in amount of the collateral trust notes secured hereby and outstanding at the time, and shall thereafter be exercised by such person or persons and in such manner as may in and by such consent be prescribed.

ARTICLE SIXTH.

It is hereby provided and agreed — anything in said notes or hereinbefore contained to the contrary notwithstanding — that the Traction Company and the Heights Company may, at any time and from time to time, on and after August 1, 1895, at their option, upon notice as hereinafter provided, pay the principal of all or any of the notes secured hereby, together with all unpaid interest then accrued thereon, provided that if only a part of said notes are sought to be thus paid before maturity, those so to be paid shall be drawn by lot by the trustee, or by some person duly authorized by it, at its office in the city of New York, and the person so drawing shall make a certificate of such drawing and shall make oath concerning the same, before a notary public. The Traction Company and the Heights Company shall publish in two newspapers of general circulation, one published in the city of New York and the other in the city of Brooklyn, New York, at least once a week, for a period of thirty days after the first publication, a notice stating the serial number of the notes thus drawn (unless all the notes are to be paid, in which event the notice shall so state, and the numbers may be omitted) and the time and place of payment of the notes to be paid. Thirty days after the day of such first publication the principal of the notes so drawn or called for payment shall become immediately due with all accrued interest thereon, and shall be paid, with accrued and unpaid interest, if any thereon, at the office of the trustee in the city of New York, to the bearer thereof, unless the same be registered, and in that case, to the registered holders thereof, upon presentation and surrender of such notes. Deposit being made with the trustee on or before the date so fixed for payment, of the amount then due on the notes so designated by notice to be paid, interest shall cease to accrue on said notes after such date of payment.

ARTICLE SEVENTH.

In case default shall be made in the payment of any interest accruing upon any of the notes hereby secured to be paid, according to the terms thereof, on any day when the same shall become due, and such default shall continue for three months after payment shall have been demanded, or in case the parties of the first part or either of them shall fail or refuse to keep, perform and observe any of the conditions, covenants and promises herein contained after being requested in writing so to do, then and thereupon the entire principal of the notes hereby secured shall, if the trustee so elects and declares, become immediately due and payable, anything in said notes or herein to the contrary notwithstanding, and, if requested so to do by the holders of a majority in value of the notes hereby secured and then outstanding, by an instrument in writing signed by them, addressed and delivered to said trustee, it shall be the duty of and it is hereby made obligatory upon the trustee in any such case to elect to declare the said principal sum due as aforesaid.

ARTICLE EIGHTH.

In case the parties of the first part shall make default in the payment of any money, principal or interest, secured to be paid by said notes or any of them, at the time when the same shall become due according to the terms thereof, or shall fail or refuse to keep, perform and observe any of the conditions, covenants and promises herein contained, and such default in the payment of interest shall continue for the space of three months after demand, then the trustee, upon requisition as hereinafter provided or without such request, and upon being indemnified to its satisfaction against loss or liability in the premises, may itself, or by its attorneys or agents, with or without the order or decree of any court, and as by the trustee may be determined or by any court may be ordered or decreed, sell and dispose of at public auction, upon such notice and in such manner as is hereinafter specified, all or any part of the shares of stock, choses in action and other property pledged hereunder.

ARTICLE NINTH.

In the event of any exercise of the power of sale hereinbefore contained in respect of the said shares of stock, choses in action or other property pledged hereunder, such sale shall be made by

the trustee or by its attorney or attorneys, agent or agents, at public auction, at such time or times, and at such place or places in the city of New York as may be determined by the trustee. The trustee shall first give notice of the time and place of any such sale by publication thereof in at least two daily newspapers. one published in the city of New York and one in the city of Brooklyn, N. Y., not less than twice a week, for three consecutive weeks immediately prior to the week in which such sale is to take place. And the trustee shall have power in its discretion, to adjourn such sale from time to time, as to the whole or any part of the property to be sold, and, if so adjourned, to make sale upon the day to which the adjournment is had without further notice of the time to which the sale may be so adjourned other than a publication of a notice of such adjournment at least once a week during the interval covered bu such adjournment, in the same newspapers in which the original notice may have been published.

Upon such sale the trustee shall grant, bargain, sell, assign, transfer and deliver possession of all and singular the shares of stock, choses in action and other property pledged hereunder and so sold, to the purchaser or purchasers thereof, and the same shall thereupon be freed and discharged from the trust and lien hereby created, and the trustee, as the irrevocable attorney in fact of the parties hereto of the first part and each of them (for that purpose by these presents duly constituted), shall make, execute and deliver to such purchaser or purchasers such good and sufficient assignments, transfers, bills of sale or other instruments as may be necessary or proper to vest in such purchaser or purchasers full and complete title and ownership, of and to the property so sold, and such sale, made as aforesaid, shall be a perpetual bar, both in law and equity, against the parties hereto of the first part and their respective successors, and all other persons lawfully claiming or to claim the said property or any part thereof by, from, through or under them or either of them. Upon the making of any such sale the trustee shall apply the proceeds thereof as follows, that is to say:

1st. To the payment of the costs and expenses of such sale, including reasonable compensation to the trustee, its agents and attorneys and counsel, and all expenses, liabilities and advances made and incurred by the trustee in the execution of the trust hereby created.

2d. To the payment of the whole amount of the principal and interest which shall then be owing and unpaid upon the said notes and every of them, whether the principal by the tenor of the said notes be then due or yet to become due, and in case of the insufficiency of such proceeds to pay in full the whole amount of principal and interest owing or unpaid upon the said notes, the same shall be paid ratably, in proportion to the amounts owing or unpaid upon them respectively, without preference of any note over any of the others.

3d. The surplus, if any, shall be paid over, on demand, to the parties hereto of the first part, or otherwise as directed by any court of competent jurisdiction.

It is expressly covenanted and agreed that the receipt or receipts of the said trustee, its successor or successors, shall be a sufficient discharge to the purchaser or purchasers of the said property pledged and sold hereunder or any part thereof, for his or their purchase money. Any holder or holders of any of the said notes may become such purchaser or purchasers for his or their own account.

ARTICLE TENTH.

Upon continuous or other default, as aforesaid, in the payment of the interest or principal of the notes hereby secured, or in the performance of any covenant herein contained, and upon request, in writing, signed by the holders of a majority in amount of said outstanding notes, accompanied by satisfactory indemnity to the trustee against the costs and expenses to be incurred, it shall be the duty of the trustee to enforce the rights, under these presents, of the holders of the notes hereby secured, by sale, as herein provided, or by action or actions, suit or suits, or other proceedings at law or in equity, as may be advised by counsel to be most expedient and for the interest of the holders of said notes.

ARTICLE ELEVENTH.

It is expressly understood and agreed, anything herein contained to the contrary notwithstanding, that the trustee shall not be under any obligation to take notice of any default hereunder of the parties hereto of the first part, or to give effect to any such default or to recognize the same for any purpose under this indenture, unless requested in writing by the holders of the majority in amount of the notes secured hereby, outstanding at the time, and unless indemnified to its satisfaction in the premises, but nothing herein contained shall be construed as abridging the powers of the trustee to give effect to any default under this indenture or any other powers (expressed or implied) of the trustee under this indenture without such request.

ARTICLE TWELFTH.

Upon any sale of the property pledged hereunder, or of any part thereof, the purchaser in making payment therefor shall be entitled, after paying in cash so much as shall be necessary, to cover the costs and expenses of the sale and proceedings incident thereto, and all other charges that may be required by decree or otherwise, to be paid in cash, including reasonable compensation to the trustee and its counsel, agents and servants, to appropriate and use towards the payment of the remainder of the purchase price, any of the notes or coupons issued hereunder and entitled to participate in the proceeds of such sale, reckoning each note or coupon so appropriated and used and such sum as shall be payable thereon out of the net proceeds of the sale; and proper receipts thereupon be given to the holders of such notes or coupons, if the net proceeds of the sale shall be sufficient to pay them in full, shall be delivered up to the trustee or other person making sale under decree of the court or otherwise hereunder for cancellation; or if the proceeds of the sale shall not be sufficient to pay such notes or coupons in full, then proper indorsement shall be made thereon of the amount so paid on account therefor, and they shall then be returned to the holders.

ARTICLE THIRTEENTH.

The trustee may, and upon the written request of the holder or holders of three-fourths in value of the outstanding notes secured hereby, shall waive any default hereunder on the part of the parties hereto of the first part; provided, however, that no waiver of any such default shall extend to or be taken to affect any subsequent default, or to impair the rights arising thereunder, unless such subsequent default is waived in manner and form as herein provided.

ARTICLE FOURTEENTH.

The provisions above set forth for the sale of the property pledged hereunder, in case the parties of the first part make default in the payment of the principal or interest of the notes secured thereby, are cumulative and not exclusive, and shall be in addition to all other remedies by action, suit and proceedings at law or in equity for the protection and security of the several lawful holders of the notes entitled to the security of and under this indenture. The trustee is hereby specifically authorized and empowered to bring, in its discretion, any and all actions, suits or proceedings at law and in equity that it may be advised for the purpose of carrying out the provisions and intents of this indenture; and such other legal or equitable proceedings may be in lieu of the procedings by sale of the property pledged hereinbefore provided for.

ARTICLE FIFTEENTH.

No proceeding at law or in equity shall be instituted or conducted by any holder of any of the notes secured hereby to compel a sale hereunder, or to do any other act or thing herein provided independently of the trustees, except after requisition shall have been made upon the said trustee, in manner and form as herein provided, and after refusal or neglect of the trustee to comply with such requisition according to the provisions herein made in respect thereof.

ARTICLE SIXTEENTH.

The persons in whose names notes are registered upon the books kept by the trustee for the purpose, shall be taken by the trustee to be the holders and owners of such notes for the purposes of executing any requests required to be executed by note holders and for all other purposes of this indenture; and the trustee may require the ownership of notes issued under this indenture, and not registered, to be proven by the production of the notes or by such other evidence as the trustee may deem sufficient.

ARTICLE SEVENTEENTH.

The parties hereto of the first part agree to pay all expenses of the execution, carrying out and enforcement of the various provisions of this indenture, including reasonable compensation to the trustee, all expenses of the protecting the trust estate, and all legal and other expenses actually incurred by the trustee, and that all such expenses of the trustee shall be a first lien upon the trust estate until paid.

ARTICLE EIGHTEENTH.

It is further expressly agreed by said parties of the first part, and all holders of notes issued hereunder, that no responsibility shall attach to the trustee for its acts hereunder, or for or in respect of any matter or thing, whether of omission or commission, except its own willful default or gross negligence. It is understood and agreed that the trustee shall not be answerable for any default or misconduct of any agent or attorney by it appointed hereunder, provided only that such agent or attorney be selected with reasonable care.

ARTICLE NINETEENTH.

It is expressly agreed that the trustee may from time to time, as it shall deem it necessary or proper, apply (at the expense of the trust estate) to any court of competent jurisdiction for aid or tingent, unless it shall first be indemnified to its satisfaction in this indenture or the execution of this trust.

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It is further agreed that the Trustee shall be under no obligation or duty to take and proceedings for the purpose of enforcing this trust which involves expense or liability, immediate or contingent, unless it shall first be indemnified to its satisfaction in respect thereof.

And it is further agreed that the trustee shall have full power and authority, inter alia, and generally at the expense of the trust estate, to do any act or thing in respect of the said shares of stock and other property pledged hereunder, as fully and completely as if it were the absolute owner thereof, including the power to ask for, bring or unite in appropriate proceedings in respect thereto, to join in any plan or plans or reorganization in respect thereto of either or both of the parties of the first part hereto, and take its proportion of the securities issued under any reorganization, and also, in case of the sale of any property pledged hereunder, after default by the parties hereto for the first part, to buy in, for the benefit of the holders of the notes hereby secured, the shares of stock, choses in action and other property, or any part thereof, that may be sold under the provisions hereof.

ARTICLE TWENTIETH.

It is expressly understood and agreed that this indenture and all its provisions are strictly inter partes, and shall not be construed to create any trust, liability or obligation to or in favor of any person, firm or corporation, except the parties to these presents and the holders of the notes hereby secured. All persons accepting any of said notes hereby secured that all the provisions of this indenture shall be binding upon them.

ARTICLE TWENTY-FIRST.

Upon payment or other satisfaction of the principal and interest of all of the notes which shall have been issued hereunder or upon, providing for such payment by depositing with the trustee, upon special trust therefor, the entire amount due upon all the notes outstanding when the same shall be due and payable and the interest then due and unpaid, together with all other sums which

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may be payable hereunder the trustee shall, on demand of the parties of the first part, and at their cost and expense, forthwith surrender, reassign and retransfer and deliver to the assigns, all shares of stock and other property which may be then held by the trustee hereunder.

ARTICLE TWENTY-SECOND.

In the event of the refusal, failure, neglect or incapacity of the trustee herein named, or of its successor or successors in this trust, to execute the same, then the holder or holders of a majority in value of the said notes then outstanding shall select another trustee or trustees to act in its or their place, and upon its or their acceptance in writing of said trust, which shall be filed in the office of the clerk or register of the city and county of New York, the person or persons or corporation so selected and accepting shall be thereby submitted for the originally named trustee, the party of the second part hereto.

The parties hereto shall in any and every such case make and execute upon request any such assignments, conveyances, releases and assurances as may be legally necessary or advisable for the more fully vesting in and confirming to such new trustee or trustees such estate, rights, power and duties.

The word trustee, when used in these presents, shall and for all purposes be taken, held and construed to mean, include and describe the person or persons or corporation who or which shall for the time being, and from time to time, be charged with the trusts hereby created and herein expressed.

ARTICLE TWENTY-THIRD.

The several covenants, promises and agreements by the parties of the first part herein contained shall be binding as well upon their respective successors and assigns.

For the debt and notes secured hereby, the Traction Company and the Heights Company are liable jointly and severally in personam, and any deficiency, after exhausing the securities pledged hereunder, may be enforced against them or either of them, but not against their officers, directors or stockholders individually, and it is expressly agreed between the parties hereto, and by every person who shall take or hold any note or notes issued hereunder, that the existing and all future officers, directors and stockholders of the Traction and Heights Companies shall not be individually liable to any extent or for any purpose with respect to said notes or any of them.

ARTICLE TWENTY-FOURTH.

The trustee is not to see to the recording or filing of this indenture, if such recording or filing shall be necessary, or to take any action or to do any act for protecting, perpetuating or keeping good the lien of these presents upon the whole or any portion of the property pledged hereunder, for the payment of said notes and interest secured hereby, save in its discretion; but the parties of the first part, their successors and assigns, shall and will, from time to time, do all things needful in that behalf.

ARTICLE TWENTY-FIFTH.

The trustee has become party to this instrument, in order to signify its acceptance of the trusts hereby created. The recitals and statements of fact herein contained, and contained in the notes secured hereby, shall be taken as statements by the parties of the first part, and shall not be construed as made by the trustee.

In witness whereof, the Long Island Traction Company and the Brooklyn Heights Railroad Company, parties hereto of the first part, have respectively caused these presents to be subscribed, in triplicate in their corporate names, by their respective presidents, and their corporate seals to be hereto and as well to the two other originals hereof, affixed and attested by their respective secretaries; and the New York Guaranty and Indemnity Company, party hereto of the second part, has caused these presents to be subscribed in triplicate by the president, and its corporate seal to

be hereunto and the other two other originals hereof affixed and attested by its treasurer, all the day and year first above written.

LONG ISLAND TRACTION COMPANY,

Ву	
President	•
Attest:	
•••••	
Secretary.	
THE BROOKLYN HEIGHTS RAILROAD COMPANY,	
By	
President	•
Attest:	
Secretary.	
•	
NEW YORK GUARANTY & INDEMNITY COMPANY,	
Ву	
Attest:	•
•••••	
Treasurer.	, .
Sealed and delivered, in	
triplicate, in the presence of	
••••••••••	
STATE OF NEW YORK, COUNTY OF	
On this day of July, A. D. 1894, before me pers	
ally came, to me known, and known	
to me to be the person who executed the foregoing inst	
ment as the president of the Long Island Traction Compa	
and who, being by me duly sworn, did dispose and say the	
he resides in, and that at the time the execution of the foregoing instrument he was and now is	
president of the Long Island Traction Company; that he known	
president of the hone istant fraction company, that he know	11 13

the corporate seal of said Traction Company; that the seal affixed to the foregoing instrument is the corporate seal of the said Traction Company, and was so affixed by the order of the board of directors of the said Traction Company, and that by like order he executed the foregoing instrument as its president. On the same day, before me personally came...... to me known and known to me to be the person who executed the foregoing instrument as the secretary of the said Traction Company, who, being by me duly sworn, did dispose and say that he resides in, and that at the time of the execution of the foregoing instrument he was and now is the secretary of the Long Island Traction Company; that he knows the corporate seal of the said Traction Company; that the seal affixed to the foregoing instrument is the corporate seal of the said Long Island Traction Company, and was so affixed by the order of the board of directors of the said Traction Company, and that by like order he attested the same as its secretary.

STATE OF NEW YORK, COUNTY OF,

On this ... day of July, A. D. 1894, before me personally came, to me known, and known to me to be the person who executed the foregoing instrument as the president of the said The Brooklyn Heights Railroad Company, and who, being by me duly sworn, did depose and say that he resides in and that at the time of the execution of the foregoing instrument he was and now is the president of the Brooklyn Heights Railroad Company; that he knows the corporate seal of said the Brooklyn Heights Railroad Company; that the seal affixed to the foregoing instrument is the corporate seal of the said The. Brooklyn Heights Railroad Company, and was so affixed by the order of the board of directors of the said The Brooklyn Heights Railroad Company, and that by like order he executed the foregoing instrument as its president. On the same day, before me, personally came, to me known and known to me to be the person who executed the foregoing instrument as the secretary of the said The Brooklyn Heights Railroad Company, who, being by me duly sworn, did depose and say that he resides in, and that at the time of the execution of the foregoing instrument he was and now is the secretary of The Brooklyn

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Heights Railroad Company; that he knows the corporate seal of the said The Brooklyn Heights Railroad Company; that the seal affixed to the foregoing instrument is the corporate seal of the said The Brooklyn Heights Railroad Company, and was so affixed by the order of the board of directors of the said The Brooklyn Heights Railroad Company, and that by like order he attested the same as its secretary.

CITY AND COUNTY OF NEW YORK, STATE OF NEW YORK,

On this ... day of July, A. D. 1894, before me personally came, to me known, and known to me to be the person who executed the foregoing instrument as the president of the said New York Guaranty and Indemnity Company, and who, being by me duly sworn, did depose and say that he resides in, and that at the time of the execution of the foregoing instrument he was and now is the president of the New York Guaranty and Indemnity Company; that he knows the corporate seal of said New York Guaranty and Indemnity Company; that the seal affixed to the foregoing instrument is the corporate seal of the said New York Guaranty and Indemnity Company, and was so affixed by the order of the board of directors of the said New York Guaranty and Indemnity Company, and that by like order he executed the foregoing instrument as its president. the same day before, me personally came to me known, and known to me to be the person who executed the foregoing instrument as the treasurer of the said New York Guaranty and Indemnity Company, who, being by me duly sworn, did depose and say that he resides in, and that at the time of the execution of the foregoing instrument he was and now is the treasurer of the New York Guaranty and Indemnity Company; that he knows the corporate seal of the said New York Guaranty and Indemnity Company, and the seal affixed to the foregoing instrument is the corporate seal of the said New York Guaranty and Indemnity Company, and was so affixed by order of the board of directors of the said New York Guaranty and Indemnity Company, and that by like order he attested the same as its treasurer.

STATE OF NEW YORK,
CITY OF BROOKLYN, COUNTY OF KINGS,

The undersigned stockholders of The Brooklyn Heights Railroad Company, owning more than two-thirds of all the stock of the corporation, hereby consent that the foregoing indenture, dated July ..., 1894, and executed by the Long Island Traction Company and The Brooklyn Heights Railroad Company, parties of the first part, and the New York Guaranty and Indemnity Company, party of the second part, be issued.

Witness our hands and seals at said city of Brooklyn, the ... day of July, 1894.

LONG ISLAND TRACTION COMPANY,

	Ву	 ,
_	P	resident.
[SEAL.] —————,	•	
Secretary.		
In the presence of		
	 .	[SEAL.]
	 .	[SEAL.]
		[SEAL.]
	 .	SEAL.

STATE OF NEW YORK,
CITY OF BROOKLYN, COUNTY OF KINGS,

On this ... day of, 1894, before me, the undersigned, a notary public, personally came, subscribing witness to the foregoing instrument, with whom I am personally acquainted, and who, being by me duly sworn, said that he resides at; that he is personally acquainted with, and knows them severally to be the persons described in and who executed the said instrument; that he saw them severally execute and deliver the same, and that they then severally acknowledged to him, the said, that they executed and delivered the same as their free act and deed; that he, the said, thereupon subscribed his name as witness thereto; that he has possession and control of the stock books of the Brooklyn Heights Railroad Company, and is familiar

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Witness my hand and seal of office the day and year above written.

STATE OF NEW YORK,
CITY OF BROOKLYN, COUNTY OF KINGS,

On this ... day of, 1894, before me, the undersigned, a notary public, personally came to me known and known to me to be the person who executed the foregoing consent as the secretary of the Long Island Traction Company, and who, being by me duly sworn, did depose and say that he resides in; that he is the secretary of the Long Island Traction Company, and knows the corporate seal thereof; that the seal affixed to the foregoing consent is the corporate seal of the said company, and was thereto affixed by order of the board of directors of the said company, and was the voluntary act and deed of the said company, and that he signed his name thereto by the like order as secretary of said company; that he is acquainted with, and knows him to be the president of the said company; that the signature of the said, subscribed to the foregoing consent is the genuine handwriting of the said and was thereto subscribed by the like order of the said board of directors, and in the presence of this deponent.

In witness whereof, I have hereunto set my hand and official seal, the day and year above written.

 CIRCUIT COURT OF THE UNITED STATES, EASTERN DISTRICT OF VIRGINIA, IN EQUITY.

William M. Kidder et al., Complainants, against Long Island Traction Company et al., Defendants.

Bill of complaint, March 16, 1895, and decree appointing receiver.

WYNDHAM R. MEREDITH,

Solicitor for Complainants, Chamber of Commerce Building, Richmond, Va.

HENRY CRAWFORD, of Counsel.

IN THE CIRCUIT COURT OF THE UNITED STATES, EAST-ERN DISTRICT OF VIRGINIA.

UNITED STATES OF AMERICA, EASTERN DISTRICT OF VIRGINIA,

To the honorable judges of said court in equity sitting:

The complainants, William M. Kidder, who is a citizen of the State of New Jersey, and Edward W. Clark, Sabin W. Colton, Jr., Edward W. Clark, Jr., J. Milton Colton and C. Howard Clark, Jr., who are respectively citizens of the State of Pennsylvania, composing the firm of E. W. Clark & Company, file this bill of complaint in behalf of themselves and all other creditors similarly situated against the Long Island Traction Company, a corporation created by and existing under the laws of the State of Virginia, and a citizen of such State and a resident of the Eastern District of Virginia, and the Brooklyn Heights Railroad Company and the New York Guarantee and Indemnity Company, and two latter corporations created by and existing under the laws of the State of New York, and citizens of such State.

And thereupon the complainants show to the Court:

First.—The Long Island Traction Company was incorporated under the laws of the State of Virginia on or about March 13, 1893. Its capital stock, issued outstanding and nonassessable, amounts to \$30,000,000. It was organized with corporate power

among other things to become interested and control, by stock ownership and otherwise, and aid in the construction of lines of street railway in the State of New York and elsewhere. As thereto authorized by its charter and the laws of Virginia, it has become theowner of the entire capital stocks of the Brooklyn Heights Railroad and the Brooklyn, Queens County and Suburban Railroad Companies, which said two corporations own, lease and control about 244 miles of street railroad tracks in the city of Brooklyn and State of New York.

Second.—The Brooklyn, Queens County and Suburban Railroad Company is a corporate existing by consolidation made in January, 1894, and owns, controls and operates about 45 miles of street railway in the city of Brooklyn and State of New York. The entire capital stock thereof, consisting of \$2,000,000 is owned by the defendant, the Long Island Traction Company.

Third.—The Brooklyn Heights Railroad Company is a corporation organized and existing under the laws of the State of New York. Its outstanding capital stock amounts to \$200,000, and the defendant, the Long Island Traction Company is the owner of all such stock.

Fourth.— On February 14, 1893, the last named corporation the Brooklyn Heights Railroad Company, received from the Brooklyn City Railroad Company, a corporation of the State of New York, a lease for 999 years of all the system of said railroad in the city of Brooklyn, together with all franchises, appurtenances, property and equipment thereto appertaining and constituting about 200 miles of operated street railroad track; and the said Brooklyn Heights Railroad Company on or about June 6, 1893, entered into possession of such leasehold estate and has ever since held, possessed and operated the said leased street railroad system and received all of the income therefrom. The yearly rental agreed to be paid therefor was all interest upon the lessor's bonded debt and 10 per cent. dividend upon its \$12,000,000 capital stock.

Fifth.— In order to procure the execution and delivery of such lease, it was required by the lessor corporation, the Brooklyn City Railroad Company, that a permanent guaranty fund of \$4,000,000

should be deposited to secure the payment of rental of said demised railroad system and the due performance of the other conditions and covenants in said lease contained. Thereupon the said Long Island Traction Company, out of its own means, advanced and caused to be invested, the sum of \$4,000,000 in cash, and the securities purchased therewith were deposited in trust with certain agreed depositories to remain as a permanent guaranty fund for the continuing security and protection of the said lessor that the said lease for 999 years should continue to be faithfully kept and performed as to all payments and covenants. All the income, profits and increase of said guaranty fund was to belong and to be paid over to the said Brooklyn Heights Railroad Company as long as the rental was paid and the covenants of the said lease were daly kept. Complainants file herewith a copy of such lease, and pray that the same may be taken as a part of this bill of complaint as Exhibit A.

Sixth.— As inducement and consideration for said Traction Company to make such permanent advance of \$4,000,000 to be held as guaranty fund under such lease, the said Brooklyn Heights Railroad Company on April 7, 1893, signed, sealed, executed. acknowledged and delivered to the said Traction Company an agreement in writing whereby the said Brooklyn Heights Railroad Company assigned and delivered over to the said Traction Company all and singular the net profits, incomes and revenues arising from the operation of the said Brooklyn City Railroad system so leased as aforesaid, which should remain after the payment of all obligations under said lease, and an annual dividend of 10 per cent. upon its capital stock, and did further agree that if at any time by the termination of such lease or otherwise the said fund of \$4,000,000, or any part thereof, should no longer be subject to be held or disposed of under the terms of such lease as such guaranty fund, then such fund or any balance thereof should belong and be paid over to the said Traction Company.

A copy of such transfer, pledge and assignment of net income is herewith filed and made part of this bill as Exhibit B.

Seventh.— At the date of such lease the street railroad system

thus demised was operated chiefly by horse power and dummy engines, and needed repairs, improvement and new equipment. As a part of said contract of lease, it was agreed between the parties thereto that the proceeds of \$3,000,000 capital stock and \$3,000,000 of mortgage bonds of the lessor corporation should be used to defray the cost of converting its railroad into electric roads, and all such additions, improvements, extensions, branches and equipments as in the joint judgment of lessor and lessee should be necessary or advantageous to the property.

It was further covenanted in and by the tenth article of such lease, reference being thereto had, that at the expiration or other termination of such lease, the lessor would repay to the lessee the actual cost of all property, extensions, branches, additions, improvements and equipments, made, acquired and paid for by said lessee out of its own funds for use in connection with the operation of such demised property, less the cost of such part thereof as was required to preserve such railroads, extensions, additions, improvements and equipments, in good repair and serviceable conditions, and preserve and secure efficiency in the operation of the railroad.

And it was further agreed in and by the twenty-second article of such lease that if the proceeds of the new bonds and stock so as aforesaid to be sold for construction and betterment purposes should not be sufficient to fully pay for the expenditures necessary to be incurred and met for the changing the system into an electric road, then the leasee should forthwith supply all sums of money as was necessary for such purpose.

Eighth.— The said full sum of \$4,000,000 was advanced, paid over by said Traction Company and deposited in trust as such guaranty fund, and the sum of \$3,750,000 of the same still remains of such fund, the sum of \$250,000 having been drawn therefrom under the provisions of the twenty-sixth article of such lease.

By subsequent agreement, dated January 16, 1894, the Traction Company agreed with the Brooklyn City Railroad Company that in the event of the termination of the said lease by forfeiture and by the default of the lessee, the said \$2,000,000 of stock in the

Brooklyn, Queens County and Suburban Railroad Company should also become forfeited and become the property of the said Brooklyn City Railroad Company.

Ninth.— After the execution of such lease and the entry into possession by the lessee about June, 1893, active work was begun to extend and greatly improve the said leased roads and change the same into an electric system. The actual and reasonable cost of such change, extensions, reconstruction and improvements was about \$1,500,000 in excess of the proceeds of sale of the bonds and stock specifically appropriated to pay for such expenditures.

The sair Brooklyn Heights Company was without any money of its own or net income from the leased lines to pay such excess of liability, and was not possessed of any property or securities which it could pledge as security to borrow such amount, or any considerable part thereof.

It made application to the said Traction Company to again furnish financial assistance to pay off such outstanding debt.

Tenth.— In order to borrow money wherewith to pay the excess cost of additions, equipment and reconstruction of the leased property, the said Traction Company on August 1, 1894, signed, sealed, executed, acknowledged and delivered unto the New York Guaranty and Indemnity Company a certain deed of trust of such date wherein and whereby it pledged and hypothecated to said Guaranty Company the following property:

- 1. All its right, title and interest in and to the shares of capital stock of the Brooklyn Heights Railroad Company.
- 2. All dividends and increase from its ownership of all the capital stock of the Brooklyn, Queens County and Suburban Railroad Company.
- 3. All net profits derived from the lease of the Brooklyn City Railroad Company, including all present and future right to the principle and income of such \$4,000,000 guaranty fund.
- 4. The right to reimburse for the excess of cost paid for the reconstruction, additions, betterment and equipment furnished under the lease of the said Brooklyn City Railroad Company.

To have and to hold such property in trust and as security for the holders of a proposed issue of collateral trust gold notes as payable August 1, 1897, with interest at six per cent., in like gold coin on the first days of February and August in each year upon the terms and conditions in such trust deed set forth.

The said Brooklyn Heights Railroad Company joined in the execution of such trust deed and the notes issued thereunder.

A copy of such deed is filed herewith and made part of this bill as Exhibit C.

Eleventh.— Thereafter collateral trust notes to the total amount of \$1,875,000 were executed, certified and issued under the protection of such conveyance, and the same were thereupon negotiated and sold in the public market and were purchased and are now held in good faith and for value by large numbers of persons and corporations, the names of many of such holders and owners being unknown to the complainants. The complainant W. M. Kidder is the owner and holder of collateral trust notes issued under such trust deed of August 1, 1894, of the face value of \$10,000, and the amount in controversy in this action exceeds the sum of \$2,000, exclusive of interest and costs.

The complainants, Edward W. Clark and others, composing the firm of E. W. Clark & Co., are the owners and holders of said collateral trust notes issued under said trust deed of the face value of \$26,500, and upon the issue of said notes subscribed for were and are now liable to pay for \$26,500 additional of the said collateral trust notes.

Twelfth.— The complainants show that under ordinary conditions said trust property and estate described in and covered by the said deed of August 1, 1894, is of large and constantly increasing value, and the net revenue derived from the system of street railroads thus controlled by the said Traction Company, together with the income realized upon the securities held in the guaranty fund would produce a sum considerably in excess of all the current obligations resting upon the roads and property. The extensions and improvements, and the present use of electricity as a motive power, which change has only recently been put in

operation, will, without doubt, largely increase the gross income and reduce the proportionate ratio of operating expenses, and in the near future greatly increase the net result and income, all which will enure solely to the benefit and use of the trust estate created by the said conveyance of August 1, 1894. The gross annual receipts from the operation of the two railroad systems, whose net incomes constitute the trust estate and the only security to which the complainants and other holders of collateral trust notes must look for the payment of either interest or principal of their claims, amounts to the sum of about \$5,000,000, with every prospect of a steady and considerable increase, as the two systems of street railroads constitute the main system of surface transportation for the inhabitants of Brooklyn and vicinity.

Such annual gross revenue of the roads and interest upon the guaranty fund amounted during the first year's operation of the lease to over \$4,400,000, which was a very large increase over any previous annual showing. The total rental charge of the Brooklyn City Railroad Company, including dividends, bonded interest and insurance, is \$1,590,000.

Thirteenth.— About the middle of January, 1895, the employes on all the roads convertedly ceased work and engaged in a strike, which was not declared off for about six weeks. Such strike was exceedingly violent and bitter. The former employes, assisted by large numbers of outsiders during most of that period, riotously seized upon the railroad and practically prevented its opera-They refused to allow the employes to work; they overturned, wrecked and disabled hundreds of cars, demolished, cut and removed many miles of trolly wire, dragged from the cars many motormen and conductors and beat them so seriously that they were confined for weeks in the hospital. The rioting to prevent the operation of the road became so serious to property and life, and interfered so seriously with the transportation facilities on which the Brooklyn citizens were largely dependent, that about 7,000 State troops were called out and stationed for about two weeks along the said line of road to suppress such riotous outbreaks and furnish necessary protection to the lives of the employes and the safety of the railroad property.

The rioters assaulted and fired upon the troops, and several persons were killed and many injured by the return fire of the troops.

During such period of six weeks the current business of the road was almost annihilated. A large amount of property was injured or destroyed, and it was forced, for the due protection of its interests, to be subject to large and extraordinary expenses.

As a result of the general depression of business and of said strike, and consequent loss of income, repairs to property and extraordinary protective expenses, said Brooklyn Heights Railroad Company is now indebted in the sum of about \$150,000, the holders of which own no security and are pressing for payment.

Fourteenth.— In addition to such floating debt, by the terms of said lease an installment of rental amounting to \$3,000,000 will become due and payable on April 1, 1895. By the forty-second article thereof, if said default should occur, the lessor company will have the absolute right, on the notice, demand and conditions therein stated, to determine such lease and re-enter as of right and in its own estate, and thereupon and in case of such determination of such lease by reason of the default of rental payment by the terms of the thirty-ninth article thereof, all the said \$3,750,000 guaranty fund and the additional \$2,000,000 capital stock of the Brooklyn, Queens County and Suburban Railroad Company, which properties constitute the entire trust estate held for the protection and payment of your orator and others in like relation, will at once become the sole and absolute property of the Brooklyn City Railroad Company, lessor, and must be paid over by the depositaries to it, not as penalty, but as liquidated and stipulated demages.

Fifteenth.— Complainants charge that neither said Brooklyn Heights Railroad Company or the said Traction Company have the money with which to pay the said floating debt of about \$150,000 or the installment of rent due and payable on April 1, 1895. Nor have they, or either of them, any property, securities or assets which could be used as an available security upon which capitalists would be willing to lend the money necessary for such

payments. Nor is the current net income of the demised property sufficient to discharge such indebtedness.

The directors of said Traction Company are without any power to levy, enforce or collect any assessment upon the stock from the individual shareholders, and complainants are advised and believe, and, therefore, so charge, that the views of such shareholders are widely at variance as to whether any, and if so, what action should or can be taken by them to raise a voluntary subscription wherewith such pressing, past due and imminent liabilities shall be paid and the leasehold be preserved, and the guaranty fund be protected against absolute forfeiture, and in truth and fact no money has been raised and no plan to extricate said company from its financial embarrassment and prevent the loss of all its property has been adopted by the directors or proposed by them to the stockholders, althoungh only two weeks intervene before an inevitable default will authorize the lessor to subsequently take steps to determine the lease, re-enter and forfeit and take over to itself all the guaranty fund.

That the only method that is in contemplation for relieving the Long Island Traction Company is a proposed voluntary contribution among the stockholders of \$2 a share, and that no subscriptions have been made under such proposal, that complainants are informed that it is very uncertain whether or not any general response will be made by the stockholders to this call, and, further, that unless said call is voluntarily responded to by at least 75 per cent. of said stockholders, which in the opinion of complainants is exceedingly improbable, the said company will not be possessed of sufficient funds to meet its pressing obligations and to pay the rental that becomes due on April 1, 1895.

Complainants further allege that no substantial security can be offered for the repayment of said contribution, and that there is no present inducement for a large part of said stockholders to submit to said contribution and to allow the moneys thus raised to be used for the common benefit.

Complainants further allege that, if a receiver of said Long Island Traction Company be appointed with power to borrow money on the credit of the trust estate hereinbefore described, No. 98.] 1907

they believe that the necessary funds can be raised to preserve the said trust estate for the shareholders by means of said contribution or otherwise.

Sixteenth.— Complainants aver that the said trust estate embraced in the deed of August 1, 1894, is intrinsically of great present prospective value, but that it is in imminent peril of absolute extinction to the great and irreparable injury of the complainants and all other holders of the collateral trust notes secured thereby, in consequence of such exceptional circumstances and events hereinbefore recited, and the consequent financial embarrassment and temporary insolvency of the said Traction Company, and its total inability to raise the funds necessary to pay such rental and save such leasehold estate and guaranty fund from default and forfeiture.

Complainants aver that the trust estate needs, and absolutely requires, to prevent its utter extinguishment, the sum of about \$600,000, to be paid and expended between the present time and July 1, 1895; that such sum, if the court will take such trust into its possession for protection and administration, can be borrowed on the credit of the trust estate itself on terms advantageous to the complainant and other beneficiaries of such trust, and the funds so borrowed can be used under the orders of court to discharge the rental installment about to mature, and other past obligations, and thereby fully protect the valuable leasehold interest and the \$3,750,000 guaranty fund from forfeiture and extinction, and said stock of the Brooklyn, Queens County and Suburban Railroad Company, and complainant avers unless such trust estate is thus taken under the protection of the court, and such loan is procured therefor, that all such trust estate is liable to be forfeited and lost, and the holders of such \$1,875,000 collateral trust notes will be thereby deprived of their whole security, and will lose all their claims, as neither of the makers of such notes have any personal responsibility apart from such leasehold interest and guaranty fund and the net income therefrom.

Seventeenth.— Complainants have informed the said Guaranty and Indemnity Company, trustee, of the aforesaid indebtedness

and rental installment presently maturing, and the imminent peril of the common security it holds if such rental is not paid on April 1, 1895, and that the said lessee and Traction Company are embarrassed and without means to pay such rental and other debts or assets on which to borrow funds to protect their interests against default and forfeiture. And complainants have requested the said Guaranty Company to bring suit for the adequate protection of the trust estate it holds and seek under the orders of the court to borrow the necessary funds to pay such liabilities and preserve the trust from extinction; but such Guaranty Company declined to institute any judicial proceedings or initiate any other action to protect the trust, stating that it would prefer that the noteholders should do so individually.

The premises considered and forasmuch as the complainants and others of the same class are without adequate remedy at law and can only find relief in equity, where alone such trusts are cognizable and can be protected and administered, the complainants bring this bill in behalf of themselves and all other holders of collateral gold notes of the issue of August 1, 1894, who desire to become parties to this action and avail themselves of the benefits and contribute to the expenses thereof, and prays.

- 1. That the defendants, the Long Island Traction Company, the Brooklyn Heights Railroad Company and the New York Guaranty and Indemnity Company, be served with due process to be issued under the seal of this court commanding them and each of them to appear hereto and answer the premises, but without oath, and stand to and abide all such orders and decrees as the court may from time to time award and enter against them herein.
- 2. That the court will by reference or otherwise ascertain the amount of collateral trust gold notes issued under the said trust deed of August 1, 1894, held by the complainants and others, the different holders thereof and the amount of such securities held by them respectively.
- 3. That in consequence of the financial embarrassment and the insolvency of the said Long Island Traction Company, the court

forthwith appoint a receiver of such corporation and all of its property, estate, rights, credits and effects, to hold and administer with such authority and power as the court may see fit to vest in him for the purpose of such office.

- 4. That because of the imminent peril of the trust estate created by the said deed of August 1, 1894, and the exigency thereof in consequence of the financial embarrassment of the creator of such trust the court will, through the receiver to be herein appointed, take judicial possession of the said trust and fully protect and effectuate the same, and, if necessary, authorize by proper order its receiver to borrow upon the credit of such trust estate such sums of money as are necessary to pay the rental and indebtedness as will fully and effectually prevent the above-described leasehold estate and guaranty fund and the income and the revenues thereof from default, forfeiture or diminution.
- 5. That the court will also enjoin and restrain the said Brooklyn Heights Company from aiding, suffering or permitting to be done, any act or omission which would result in a default upon the covenants of the said lease, or a re-entry thereupon, or forfeiture of the said guaranty fund advanced and deposited by the said Traction Company, and prohibiting said Brooklyn Heights Railroad Company from refusing to promptly and fully carry out all such directions as the receiver of this court may from time to time give to the said Brooklyn Heights Railroad Company in and about the performance of the covenants under such lease, so as to protect it and said guaranty fund from any forfeiture or loss.
- 6. And that the court would also hold possession of such trust estate and fully protect and administer the same by such proper entry, from time to time, of all necessary and proper orders of administration until the said Traction Company shall be restored to unquestioned solvency and responsibility, or pay the principal and interest of the secured indebtedness held by the complainants and other beneficiaries, or said trust shall have been fully discharged, and for all such other and further relief as may be necessary for the due protection of the rights of all such bene-

ficiaries and as the court may be competent to award in the premises.

W. M. KIDDER, E. W. CLARK, Jr.

WYNDHAM R. MEREDITH,

Solicitor and of Counsel.

HENRY CRAWFORD,

Of Counsel.

CITY AND COUNTY OF NEW YORK. STATE OF NEW YORK,

William M. Kidder and Edward W. Clark, being duly sworn, depose and say, each for himself, that he is one of the complainants in the foregoing bill; that he has read the foregoing bill, and that the allegations therein contained are true to the best of his knowledge, information and belief.

W. M. KIDDER, E. W. CLARK, Jr.

Sworn to before me, this 16th day of March, 1895.

CHAS. E. HOTCHKISS,

Notary Public, Kings County.

Certificate filed in New York county.

CIRCUIT COURT OF THE UNITED STATES, EASTERN DISTRICT OF VIRGINIA.

WILLIAM M. KIDDER and Others

In equity.

Long Island Traction Company and Others.

Now, on this March 19, 1895, come to the complainants by Henry Crawford, their solicitor and counsel, and come also the defendants, the Long Island Traction Company and the Brooklyn Heights Railroad Company, by Messrs. White and Garnett, their solicitors and counsel; and the complainants thereupon bring on for hearing before the Honorable Nathan Goff, circuit judge, at chambers, the motion of the complainants for the appointment of a receiver of the Long Island Traction Company, and for an injunction pursuant to the prayer of said bill;

And it appearing to the satisfaction of the court that all of the defendants have had due an dtimely notice of the said application for the appointment of a receiver and an injunction, and the said motion coming up to be heard upon the verified bill of complaint and exhibits, no cause being shown against such motion, and it sufficiently appearing to the court that the complainants are entitled to such relief, it is thereupon, on motion of the counsel for the complainants, ordered, adjudged and decreed by the court that H. J. Morse, of the city of Brooklyn and State of New York. be and is hereby appointed receiver of all and singular the property, assets, contracts, rights, money, credits, choses in action and effects of the Long Island Traction Company, specially including as a part of such property all and singular the right, title and interest at law or in equity in expectancy and remainder of the said Traction Company in and to all and singular the property described in the collateral trust agreement executed to the New York Guaranty and Indemnity Company as set out in the bill herein.

To have and to hold the said property as the officer of this court and to be protected and administered and delivered over under the orders and directions of this court to be entered from time to time in this cause.

The said Long Island Traction Company and each and every of its officers, directors and agents, are hereby required and commanded forthwith upon demand of such receiver, or his duly authorized agent, to immediately sign, seal, under the corporate seal of said corporation, execute and deliver a proper deed of assignment conveying and transferring to the said receiver hereby appointed any and all moneys, contracts, debts, leases, bills, notes, accounts, books of accounts, vouchers, papers and other property in its possession or their hands or under its or their control.

And each and every of such officers, directors, agents and employes of the said Long Island Traction Company are hereby enjoined from interfering in any way whatever with the possession or management of any part of the property over which the said receiver is hereby appointed, or interfering in any way to prevent

the said receiver from the discharge of his duty under the order of this court.

Said receiver is hereby fully authorized to employ and discharge and fix the compensation of such officers, attorneys, agents and employes as in his judgment are necessary or proper to assist him in the discharge of his trust hereby created.

Said receiver is hereby fully authorized to institute and prosecute or defend, in his own name or that of said corporation, all such suits as may be necessary in his judgment for proper protection of the property and trust hereby vested in him.

Said receiver shall keep proper books of accounts, wherein shall be stated all the receipts and disbursements of his said trust under this order of appointment, and preserve proper vouchers for all payments, and file in this court monthly statements of such receipts and disbursements.

Said receiver shall from time to time, out of the funds coming into his hands from the income or receipts of the trust estate, pay all the expenses of administering the said trust estate.

He shall be at liberty from time to time to make application to the court for such further orders or directions as to the administration or protection of the trust property in his charge, or the performance of any duties in connection therewith which in his judgment may be necessary or proper.

The said receiver is hereby required within ten days from the date of this order to file with the clerk of this court a proper bond, with sureties to be approved by this court, in the penal sum of \$50,000, conditioned for the proper discharge of his duties, and obey all orders of the court herein, and to account for all funds according to such decrees as the court may from time to time enter.

Said receiver is instructed with all convenient speed to investigate and report the present condition of said trust property, and what steps are necessary in his judgment to insure it adequate protection against default, diminution and forfeiture, and what action, if any, in his judgment is necessary to be taken by the court to fully preserve the said trust estate for the benefit of the complainants and other like creditors and stockholders.

Pending the further order of the court, the said Brooklyn Heights Railroad Company is hereby enjoined and restrained from doing or permitting any act which will operate as a surrender, alteration, default or forfeiture of the lease executed to it by the Brooklyn City Railroad Company, as set out in the bill of complaint herein.

And is further enjoined and restrained from doing or permitting any act to be done in regard to the operation and administration of the said demised property contrary to the directions and instructions from time to time to be given to it by the receiver of this court, or which will tend to the injury or impairment of the trust estate now vested in such receiver by the order of this court.

NATHAN GOFF,

U.S. Circuit Judge.

March 19, 1895.

July, 27, 1895.

The Hon. S. F. Nixon, Chairman of the Assembly Investigating

Committee:

Dear Sir.— Pursuant to instructions received from you, I have examined the books and accounts of the Brooklyn Heights Railroad Company, commencing with the sixth day of June, 1893, and respectively report, covering the information desired, to wit:

The Brooklyn Heights Railroad Company, which was chartered April 1, 1887, is a short cable road (1.166 miles) running on Montague street, from Court street to Wall street ferry, Brooklyn.

All of the stock of this company is owned by the Long Island Traction Company, except sufficient number of shares owned by other parties to qualify as directors.

The capital stock and bonds of this company were given for the constructed road. It does not appear from the books of the company as to who composed the members of the shareholders of the Construction Company.

The Brooklyn Heights Railroad Company took possession of the railroads, properties and franchises of the Brooklyn City Railroad system on the sixth day of June, 1893, following the provisions of a lease, approved by the stockholders on the 14th day of February, 1893. The terms of this lease are, that the Brooklyn Heights Railroad Company should enter in possession of all the properties of the Brooklyn City Railroad Company, reconstruct and operate said lines, the Brooklyn City Railroad Company to furnish funds for the reconstruction to the extent of the funds available from the sale of the bonds and stock of the Brooklyn City Railroad Company, less such portion of said funds as had already been expended by the Brooklyn City Company the stipulation being that the Brooklyn City Railroad Company was to pay the cost of such conversion, and after all Brooklyn City funds had been expended, then the Heights Company was to proceed with the conversion with her own funds, the additions, improvements and betterments made by the Heights Company are to be paid for by the Brooklyn City Railroad Company at the expiration of the lease, or the sooner termination thereof.

The Brooklyn Heights Railroad Company pays the Brooklyn City Railroad Company a rental equal to 10 per cent. upon the capital stock of the Brooklyn City Railroad Company, all interest on bonds and other indebtedness, all taxes, insurance and all expenses.

It appears from the examination that all the terms of the lease have been carried out and that payments have been made by both companies in accordance with the agreement.

The Heights Company has extended from her own resources from the 6th day of June, 1893 up to the present time \$2,016,422.24, as per statement following:

Equipment	\$794,060 80
Track and over-head work	380,511 43
Power houses and depots	934,105 21
Horses	$92,\!255\ 20$
Total	\$2,016,422 24

I find after careful examination of vouchers and books, and the verification of the same by the indorsement of checks, that nothing has been charged in construction account which was used on account of operation, repairs or maintenance.

I find in examining estimates, that the methods employed were strictly business-like and to the advantage of the Heights Company, and consequently, to the Brooklyn City Railroad Company.

The indebtedness of the Brooklyn Heights Railroad Company at the present time is as follows:

Joint collateral trust notes, sold at 80 per cent. par	\$1,846,409	10
Promissory notes (given for funds as per face of		
said notes)	642,008	49
Taken from the guarantee fund (as provided in	•	
lease)	250,000	00
Loaned by the receiver of the Long Island Trac-	1	-
tion Company	350,000	00
Total	\$3,088,417	59

I find that the capital stock of the Brooklyn Heights Railroad Company has not been increased since its organization.

The actual cost of changing the system of the Brooklyn City Railroad Company from horse-power to electric traction, verified by the books (which also includes extensions built for electric road), since June 30, 1890, to wit: \$11,821,287.04, of which the Brooklyn Heights Railroad Company has disbursed \$2,016,422.24 of her own funds as before stated.

I find from an examination of vouchers and books of the Brooklyn Heights Railroad Company that the purchases have been made, on account of construction of the Lewis & Fowler Rail Company and the General Electric Company (including Thompson & Houston Company), as named below:

Lewis & Fowler Manufacturing Company	\$ 256,231 86
Lewis & Fowler Girder Rail Company	373,341 19
General Electric Company	414,307 68

Below I give you statements showing the amount of purchases made by the Brooklyn City Railroad Company, on account of construction, of the Lewis & Fowler Manufacturing Company, the Lewis & Fowler Rail Company, the General Electric Company, and the Thompson & Houston Company:

Lewis & Fowler Manufacturing Company	\$146 ,364 64
Lewis & Fowler Girder Rail Company	348,074 82
General Electric	114,349 00
Thompson & Houston Company	451,750 48

Below I give you a general balance sheet of the Brooklyn Heights Railroad Company, dated March 31, 1895. I have verified the statement from the books. It will be impossible at this time to give a more recent balance sheet, as the company is now preparing to make its annual report for the year ending June 30, 1895, which report will be filed with the Railroad Commissioners at as early a date as possible after it has been issued, probably about the 15th of August next.

GENERAL BALANCE.

ASSETS.

_	
Cost of road and equipment	\$ 480, 17 0 50
Brooklyn City Railroad construction account	2,017,760 02
Other permanent investments	1,073 28
Supplies on hand	147,834 05
Accrued interest	45,154 20
Accrued rentals	2,426 29
Due by agents of this Company on account of	
traffic	5,585 00
Due by disbursing committee	13,677 98
Due by companies and individuals (on open ac-	•
counts other than traffic)	11,420 79
Due by Brooklyn City Company and Suburban	
Railroad Company	39,778 67
Discount (construction)	409,557 65
Insurance paid (not earned)	6,000 00
Cash in hands disbursing committee	55,513 68
Cash in hands New York Guarantee and Indemnity	
Company	34,228 60

Cash in Long Island Bank	\$16	43
Cash on hand	47,240	10
Profit and loss (deficiency)	415,956	28
_	\$3,733,393	52
LIABILITIES.		
Capital stock	\$200,000	00
Funded debt	250,000	00
Loans and bills payable	2,972,748	53
Interest on funded and floating debt and accrued.	24,430	92
Due for wages and supplies, construction	17,911	68
Due for wages and supplies, operation	40,153	11
Due companies and individuals (on open accounts)	91	50
Rents accrued, not payable	4,405	90
Taxes accrued not payable	99,246	
Legal expenses and damages accrued	37,446	
Rentals accrued not payable	86,958	
	\$3,733,393	52

Respectfully submitted,

(Signed)

F. BOSTWICK,

Accountant.

FIRST CONSOLIDATED 5 PER CENT. GOLD MORTGAGE BONDS OF THE TROY CITY RAILWAY COMPANY, TO THE CENTRAL TRUST COMPANY OF NEW YORK, AS TRUSTEE, SECURING FIRST CONSOLIDATED 5 PER CENT. FIFTY-YEAR GOLD BONDS TO AMOUNT OF \$2,000,000.

Dated, December 1, 1892, running from October 1, 1892, maturing October 1, 1942.

WILLIAM SHAW,

Counsel, Troy, N. Y.

FIRST CONSOLIDATED 5 PER CENT. GOLD MORTGAGE BONDS OF THE TROY CITY RAILWAY COMPANY, TO THE CENTRAL TRUST COMPANY OF NEW YORK, AS TRUSTEE.

This indenture, made this first day of December, in the year of our Lord one thousand eight hundred and ninety-two,, between the Troy City Railway Company (hereinafter called the Railway company), a railroad corporation organized and existing under the laws of the State of New York, party of the first part, and the Central Trust Company of NewYork (hereinafter called the Trustee), a corporation organized and existing under the laws of said State, party of the second part, witnesseth:

Whereas, The Railway Company was originally incorporated under the name of the Troy and Albia Horse Railroad Company, and its corporate title was thereafter duly changed to the Troy City Company, and it is duly authorized to lay out, construct, maintain and operate street surface railways in various avenues, streets and highways in the city of Troy, in the county of Rensselaer and State of New York, including that portion of said city commonly called Albia, and has duly acquired the right to operate its railroads by electricity or electric motive power; and,

Whereas, The Troy and Lansingburgh Railroad Company is a railroad corporation, organized and existing under the laws of the State of New York, with power to lay out, construct, maintain and operate a street surface railway from the city of Troy to the adjoining village of Lansingburgh, in said county of Rensselaer, and from thence to the adjoining village of Waterford, in the county of Saratoga, in said State, and in and over certain avenues, streets and highways in said city and villages; and on or about the 7th day of November, 1892, did duly and lawfully lease all its railroads, leased lines, rights, franchises and property to the Railway Company, for the term of the corporate charter of the former company, and of all renewals and extensions thereof; and,

Whereas, The Troy and Cohoes Railroad Company is a railroad corporation, organized and existing under the laws of the State of New York, with power to lay out, construct, maintain and operate

a street surface railway from the said city of Troy to the adjoining village of Green Island, and from thence to the adjoining city of Cohoes, in the county of Albany, in said State, and in and over certain avenues, streets and highways in said cities and village; and on or about the 28th day of October, 1867, it duly and lawfully leased all its railroads, rights, franchises and property to the said Troy and Lansingburgh Railroad Company, for the term of the corporate charters of the said companies, and of all renewals and extensions thereof; and,

Whereas, The Lansingburgh and Cohoes Railroad Company is a railroad corporation, organized and existing under the laws of the State of New York, with power to lay out, construct, maintain and operate a street surface railway from the said village of Lansingburgh to the said city of Cohoes, and in and over certain avenues, streets and highways in said city and village; and on or about the 14th day of May, 1880, duly and lawfully leased all its railroads, rights, franchises and property to the said Troy and Lansingburgh Railroad Company for the term of the corporate charters of the said companies, and of all renewals or extensions thereof; and,

Whereas, The Waterford and Cohoes Railroad Company is a railroad corporation, organized and existing under the laws of the State of New York, with power to lay out, construct and maintain and operate a street surface railway from the said village of Waterford to the said city of Cohoes, passing through a portion of the town of Waterford, and in and over certain avenues, streets and highways in said village, town and city; and on or about the 29th day of May, 1889, it duly and lawfully leased all its railroads, rights, franchises and property to the said Troy and Lansingburgh Railroad Company, for the term of the corporate charters of the said companies, and all renewals and extensions thereof; and,

Whereas, The Railway Company has acquired, and is nowpossessed of all leasehold rights, interests and possession of the said Troy and Lansingburgh Railroad Company, under the several leases hereinbefore mentioned, and is authorized and empowered to maintain and operate street surface railroads in and between

the said cities of Troyand Cohoes, and the villages of Green Island, Lansingburgh and Waterford, and to establish a uniform system of railway for the entire territory; and,

Whereas, The said companies, at various times, have respectively acquired valuable rights and privileges in relation to the use of the avenues, streets and highways and bridges over which their railroads run, and in relation to the operation of their respective railroads, by concessions from the different municipalities in which the said railroads are severally operated, or by contract, or otherwise: to all which rights and privileges the Railway Company has succeeded in the manner hereinbefore specified; and,

Whereas, By the terms of the said lease from the said Troy and Lansingburgh Railroad Company to the Railway Company, the latter company covenanted and agreed to pay all the bonded and debenture indebtedness of the Troy and Lansingburgh Railroad Company, and to assume and pay all its outstanding obligations and liabilities; and,

Whereas, The said Troy and Lansingburgh Railroad Company did heretofore execute and deliver to John L. Manning, George A. Lally and John Flagg, as trustees, a certain mortgage or deed of trust, bearing date the 1st day of July, 1873, and recorded in the office of the clerk of the county of Rensselaer on the 28th day of July, 1873, in Book of Mortgages No. 140, at page 141, etc., being a first lien upon its railroad and property, to secure an issue of its bonds to the amount of one hundred thousand dollars (\$100,000), payable, one-half thereof at the end of fifteen years, and the remaining half thereof at the end of twenty years from said date, with interest at the rate of 7 per centum per annum; of which issue there are bonds now outstanding to the amount of fifty thousand dollars (\$50,000), with accrued interest thereon from July 1, 1892, and no more; and.

Whereas, The said Troy and Lansingburgh Railroad Company did also heretofore execute and deliver to Francis N. Mann, Jr., and William H. Doughty, as trustees, a certain other mortgage or deed of trust, bearing date the 16th day of April, 1888, and recorded in the office of the clerk of the said.

county of Rensselaer, on the 23d day of April, 1888, in Book of Mortgages No. 217, at page 355, etc., being a second lien upon its railroad and property, to secure an issue of its bonds to the amount of two hundred thousand dollars (\$200,000), payable as in said mortgage or deed of trust set forth, with interest at the rate of 5 per centum per annum; of which there are bonds now outstanding to the amount of one hundred and fifty thousand dollars (\$150,000), with accrued interest thereon from October 1, 1892, and no more; and,

Whereas, The said Troy and Lansingburgh Railroad Company did heretofore issue its certain debenture notes, bearing date the 2d day of February, 1880, payable with interest at the rate of 6 per centum per annum, the same being now outstanding to the amount of about one hundred thousand dollars (\$100,000), with accrued interest thereon from the 2d day of August, 1892; and,

Whereas, The said Troy and Lansingburgh Railroad Company is also indebted in various sums of money aggregating about fifty thousand dollars (\$50,000); and,

Whereas, The Railway Company did heretofore, under its former name of the Troy and Albia Horse Railroad Company, execute and deliver to Lewis E. Gurley, William W. Whitman and Thomas A. Knickerbacker, as trustees, a mortgage or deed of trust bearing date the 15th day of December, 1876, and recorded in the office of the clerk of said county of Rensselaer on the 30th day of December, 1876, in Book of Mortgages No. 159, at page 412, etc., being a first lien upon its railroad and property, to secure an issue of its bonds to the amount of thirty-five thousand dollars (\$35,000), payable as in said mortgage or deed of trust set forth, with interest at the rate of 7 per centum per annum; of which issue there are bonds now outstanding to the amount of thirty-four thousand dollars (\$34,000), with accrued interest thereon from the 1st day of July, 1892, and no more; and,

Whereas, The Railway Company is also indebted in various unsecured obligations and liabilities, incurred for necessary buildings, car and power stations, and other property, and in the construction, completion and electrical equipment of its said railroad,

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to a large amount in the aggregate, which it desires to pay off and have discharged; and,

Whereas, The capital stock of the said Troy and Lansingburgh Company is seven hundred thousand dollars (\$700,000), consisting of 14,000 shares of the par value of \$50 each, of which the Railway Company now owns 2,000 shares, of the par value of one hundred thousand dollars (\$100,000); and,

Whereas, The Railway Company desires to purchase the remainder of the said capital stock of the said Troy and Lansing-burgh Railroad Company from the holders thereof, by issuing to them, in part payment therefor, 5 per cent. fifty-year gold bonds of the Railway Company, in order that the Railway Company may thus acquire the absolute title and ownership of all the railroads, rights, franchises and property of the said Troy and Lansingburgh Railroad Company, in accordance with the statutes of the State of New York in such case made and provided; and,

Whereas, For the purpose of acquiring the said capital stock, of providing for the payment of the bonds, debentures, obligations and liabilities of the said Troy and Lansingburgh Railroad Company, and of the Railway Company, hereinbefore mentioned, of unifying, extending and improving the system of railways now owned, leased and operated by the Railway Company, of more fully developing its property and franchises and of simplifying the management of said railways and property, the Railway Company has resolved to exercise the borrowing power conferred upon it by law, and is about to make an issue of two million dollars (\$2,000,000), par value, of its corporate bonds, to be denominated "First Consolidated 5 Per Cent. Fifty-Year Gold Bonds," to be secured by this indenture; and,

Whereas, Though the said bonds may be issued at different times, they are all to be equally secured by this indenture, are to be authenticated by a certificate to be indorsed thereon signed by the Trustee, and are to be substantially in the following form, to wit: UNITED STATES OF AMERICA — STATE OF NEW YORK.
TROY CITY RAILWAY COMPANY FIRST CONSOLIDATED 5 PER CENT. FIFTY-YEAR GOLD BOND.

The Troy City Railway Company, for value received, hereby promises to pay to the bearer, unless this bond is registered, and if registered, then to the registered holder hereof, on the 1st day of October, 1942, the sum of one thousand dollars (\$1,000) in gold coin of the United States, of the present standard of weight and fineness, at its agency in the city of New York, together with interest thereon at the rate of 5 per centum per annum, from the 1st day of October, 1892, payable at the said place, in like gold coin, on the first days of April and October in each year, on presentation and surrender at the place aforesaid, of the annexed coupons as they severally become due.

This bond is one of a series of 2,000 bonds, each for the sum of one thousand dollars (\$1,000), and of like tenor and date, and numbered consecutively from 1 to 2,000, both inclusive, and amounting in the aggregate to two million dollars (\$2,000,000), the payment of all of which bonds is equally secured, without priority or preference, by a mortgage or deed of trust, of even date herewith, to the Central Trust Company of New York, as trustee, conveying all the railway, rights of way, and leased lines of the said Railway Company, the extensions and branches of its said railway, and all its property, both real and personal, income, tolls, profits and franchises, now owned or now in process of construction, and all other property and rights specifically described in the said mortgage or deed of trust.

The principal of this bond may, in the manner and with the effect prescribed by the said mortgage or deed of trust, be declared to be due by reason of three months' default in the payment of interest, or of default in the performance of other obligations imposed upon the Railway Company by the said mortgage or deed of trust.

It is expressly agreed between every holder of this bond, and all present and future stockholders of the said Railway Company,

that every stockholder shall be exempt from personal liability for the payment of either principal or interest on this bond.

This bond may be registered as provided by the indorsement hereon.

This bond shall not become obligatory until the certificate indorsed hereon is signed by the said Trustee, or its successors in the trust.

In witness whereof, the Troy City Railway Company has caused its corporate seal to be hereunto affixed, and the same to be attested by the signatures of its president and secretary, on this 1st day of December, 1892.

	TROY CITY RAILWAY (COMPANY,
	Ву	
		President.
[L. S.]		
Attest.		
• • • •	• • • • • • • • • • • • • • • • • • • •	
	Secretary.	
•	(Form of Coupon.)	
\$ 25.		

The Troy City Railway Company will pay to the bearer on the 1st day of, twenty-five dollars (\$25) in United States gold coin, at its agency in the city of New York, for semi-annual interest on its first consolidated 5 per cent. mortgage bond, No. . .

Treasurer.

(Form of Registration Clause.)

This bond may be registered in the owner's name on the company's books, at its agency in New York city; such registry being noted on the bond by the company's transfer agent; after which no transfer shall be valid, unless made on the company's books by the registered owner, and similarly noted on this bond; but the same may be discharged from the registry by transfer to the bearer, after which it shall be transferable by delivery; but it may be registered again as before. The registry of this bond shall not restrain the negotiability of the coupons by delivery merely; but the coupons

may be surrendered, after which the interest shall be payable only to the registered owner of the bond.

(Form of Trustee's Certificate.)

This is one of a series of bonds issued by the Troy City Railway Company, as authorized by the mortgage or deed of trust referred to in the within bond.

Trustee,	YORK,	NEW	\mathbf{OF}	COMPANY	TRUST	CENTRAL
,		7	$\mathbf{B}\mathbf{y}$			
President.	7					

And, Whereas, The execution and issue of this indenture and of the said bonds have been duly authorized by the board of directors of the Railway Company, by and with the consent in writing of the stockholders owning more than two-thirds of the capital stock of the Railway Company, which consent has been duly acknowledged and filed and recorded in the office of the clerk of the county of Rensselaer, in the State of New York, in which county the Railway Company has its principal place of business; now, therefore, this indenture witnesseth:

That the Troy City Railway Company, party of the first part hereto, the better to secure the payment of the said bonds and coupons, and in consideration of the above recited premises, and of the sum of one dollar (\$1) to it duly paid by the Central Trust Company of New York, party of the second part hereto, at or before the ensealing and delivery of these presents, the receipt whereof is hereby acknowledged, hath granted, bargained, sold, assigned, transferred and conveyed, and by these presents doth grant, bargain, sell, assign, transfer and convey unto the Central Trust Company of New York, party of the second part hereto, as trustee, and to its successors in the trust, all the railroads, railroad routes, extensions and branch lines of the Railway Company, now owned and now in process of construction, and all other property, real, personal and mixed, of the Railway Company, of every name and description whatsoever and wheresoever situated, constructed or operated, including and comprehending all lands, tenements, hereditaments, appurtenances, plants, rights and

privileges of way, buildings, structures, superstructures, car, power and station houses, workshops, machine shops, sheds, fixtures, bridges, culverts, main lines, branch lines, side tracks, turnouts, switches, terminals, depots, depot grounds, rolling stock. poles, wires, electrical and other appliances and equipments, machinery, tools, implements, grants, easements, contracts, leases, concessions, consents, licenses, and all other chattels now owned by the Railway Company; all of which having the nature of chattels, are hereby declared and agreed to be fixtures and appurtenances of the railroads of the Railroad Company, and are to be treated and taken as part thereof. And, also, all the right, title and interest, property and estate acquired or possessed by the Railway Company, under the several leases hereinbefore mentioned, executed respectively by the railroad companies hereinbefore and hereinafter named, in and to all the railroads, railroad routes, extensions, branch lines, and all other property, real, personal and mixed, of every name and description whatsoever and wheresoever situated, constructed or operated, including and comprehending all classes and items of property of the designation and description hereinbefore enumerated, now owned respectively by the Troy and Lansingburgh Railroad Company, the Troy and Cohoes Railroad Company, the Lansingburgh and Cohoes Railroad Company, and the Waterford and Cohoes Railroad Company. And, also, all the right, title, interest, property and estate which may or shall at any time hereafter be acquired by the Railway Company in and to the railroads, rights, franchises and property above described of the said Troy and Lansingburgh Railroad Company.

Together with all the corporate rights, privileges, immunities and franchises, including its franchise to be a corporation, of the Railway Company, and all tolls, fares, rents, income, issues and profits thereof.

To have and to hold all and singular the railroads, premises, lands, grants, easements, rights, privileges, immunities, licenses, consents, franchises and other property, real, personal and mixed, hereby conveyed, or intended so to be, with the hereditaments

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and appurtenances thereunto belonging, unto the Trustee, its successor or successors, in the trust, subject, however, to the several mortgages hereinbefore described, respectively, executed by the Railway Company and the Troy and Lansingburgh Railroad Company, so far as they cover the same property, until the bonds thereby respectively secured shall be paid, or shall be exchanged for the bonds hereby secured, as hereinafter provided, and subject, also, to the terms and conditions of the several leases above recited, and to all the conditions and restrictions under which the herein mortgaged property is held by the Railway Company, or by the said lessor companies, in trust, nevertheless, for the uses and purposes hereinafter expressed and declared.

ARTICLE FIRST.

The Trustee shall suffer the Railway Company to possess, manage, control and operate and enjoy all the railroads and property aforesaid; to receive to its own use all the tolls, fares, freight, rents, income and profits thereof; and to receive the dividends and vote on all the stock of the Troy and Lansingburgh Railroad Company acquired or to be acquired by the Railway Company, so long as the Railway Company shall well and truly perform all and singular the stipulations of the bonds and coupons attached thereto, hereby secured, and the covenants of this indenture.

ARTICLE SECOND.

The Railway Company hereby covenants and agrees with the Trustee, that it will well and truly pay the bonds secured by this indenture and the interest thereon, according to the tenor thereof, and all taxes, water rates, assessments, prior obligations or liabilities incurred or assumed by it, the lien whereof might or could be held to be superior to the lien of this indenture, to the end that the priority of this indenture may, at all times, be fully maintained and preserved.

After this indenture shall have been duly executed, delivered and recorded, the Railway Company shall execute the bonds intended to be secured hereby and deliver the same to the trustee, to

be certified or countersigned by the trustee as herein and in said And the trustee shall thereupon forthwith cerbonds provided. tify or countersign and return to the railway company for issue, an amount of said bonds equal, at the par value thereof, to one hundred and fifty thousand dollars (\$150,000), which the railway company agrees to apply exclusively to the payment of the debenture notes and floating debt of the said Troy and Lansingburgh Railroad Company, assumed by the railway company as part of the consideration for the lease hereinbefore mentioned. The trustee shall also certify or countersign and return to the railway company, an amount of said bonds equal, at the par value, to two hundred and sixteen thousand dollars (\$216,000), which the railway company agrees to apply exclusively to the payment of its present unsecured indebtedness incurred in the purchase of lands and the erection of necessary buildings, car and power stations and in the construction, completion and electrical equipment of its railroads.

ARTICLE FOURTH.

The trustee shall from time to time, upon receiving in exchange therefor, an equal amount, at par value, of any of the outstanding bonds of the railway company, or of the said Troy and Lansing-burgh Railroad Company, aggregating two hundred and thirty-four thousand dollars (\$234,000) and issued under the mortgages hereinbefore described, certify or countersign a further amount of the bonds secured by this indenture, not exceeding the said sum of two hundred and thirty-four thousand dollars (\$234,000), par value, and shall deliver the same so certified or countersigned to the person or corporations surrendering to the trustee such outstanding bonds, to an equal amount at par value thereof. All bonds so surrendered to the trustee shall be cancelled by it and delivered up to the railway company.

ARTICLE FIFTH.

The trustee shall, from time to time, upon receiving in exchange therefor shares of the capital stock of the said Troy and Lansingburgh Railroad Company (the said capital stock, not already owned by the railway company, consisting of twelve thousand shares of the par value of fifty dollars each), certify or countersign the remaining bonds secured by this indenture, and shall deliver the same, so certified or countersigned, to the persons or corporations delivering to the trustee said shares of stock, an amount equal, at the par value thereof, to one hundred and sixteen dollars and sixty-six and two-thirds cents (\$116.662-3), in bonds, for each share of said stock so delivered to the trustee; and all the certificates of stock thus received shall be surrendered to said Troy and Lansingburgh Railway Company for the issue of new certificates therefor to the railroad company as owner thereof for shares of stock therein represented; and thereupon the new certificates of stock so issued in place of the certificates so surrendered, as well as the certificates for the two thousand shares of such stock now held by the railway company, shall be delivered to and held by the trustee, as additional collateral security for the payment of the bonds secured by this indenture, upon the terms and conditions But nothing herein contained shall deprive the railway company of its right to represent and vote upon said stock, whenever it may desire so to do, and to receive the dividends thereon, so long as the conditions of this indenture shall be kept and performed.

ARTICLE SIXTH.

In case the railway company shall fail to pay the interest on any of the bonds secured by this indenture, or any part thereof, when due and payable according to the tenor thereof, and shall continue in such default for three months after payment thereof has been demanded at its agency in the city of New York, then and thereupon the principal of all the bonds hereby secured shall become and be immediately due and payable, provided the trustee gives notice in writing to the railway company, while such default continues, of its election to that effect, which notice the trustee shall be bound to give, if required in writing so to do by the holder of one-quarter in amount of all such bonds then outstanding, provided, nevertheless, that at any time after such default shall have been so made and shall have continued as aforesaid, and be-

fore the actual payment of the interest, it shall be lawful for a majority in interest of the holders of all such bonds then outstanding for the time being, to direct the trustee, by a written instrument signed by them, either forthwith to exercise its power to declare the principal of said bonds due and payable, or to waive the exercise of said power (if exercised), or to withdraw and annul the exercise of said power (if exercised), either absolutely or on such terms as may be directed by the said majority, by the same instrument, and the trustee shall act in accordance with such directions. And in case such notice of election has been given and is afterwards withdrawn or annulled by such direction, the railway company shall have no right to treat the said bonds as having become due or payable under such notice, provided nevertheless, that no action taken by the trustee, or by the bondholders under this article, as to any default, shall prejudice or affect the powers or rights of the trustee, or of the bondholders, in the event of any subsequent default.

In case the property hereby conveyed, or any part or portion thereof, shall be sold under or by virtue of any lien having priority over this indenture, then the principal of all the bonds hereby secured shall become and be immediately due and payable simultaneously with such sale.

ARTICLE SEVENTH.

If and whenever the railway company shall make any default in payment of the interest upon any of the said bonds, and such default shall continue for the period of three months after demand made for such payment; or in case the principal of any of the said bonds becomes due and payable, and is not paid on demand; or in case of the violation of any other of the covenants in this indenture contained, the trustee, may, in its discretion, and must, on the written request of the holders of one-half in amount of all such bonds then outstanding, take, with or without suit for foreclosure, actual possession of the said railroad and of all and singular the property, things and effects hereby conveyed; and the trustee may personally, or by attorney, manage and operate the same and receive all tolls, fares, freights, income and profits thereof, until

such time as the said bonds and the interest thereon are fully paid and satisfied. The trustee may, if it shall deem it advisable after such entry as aforesaid, demise and let the said railroads, subject, however, to the provisions hereof, to any person or persons, corporation or corporations, willing to work and operate the same, for such term or period, upon such rent or proportion of receipts or profits, and generally upon such terms and conditions, as the trustee shall in its discretion deem proper.

ARTICLE EIGHTH.

In case of such entry and operation by the trustee, or in case of such lease of the premises hereby conveyed, the trustee shall apply the money received by it from such operation or lease as follows: First, to the payment of the expenses of the trust hereby created, including its own compensation and counsel fees, the expenses of the management of the said railroads and property, and the cost of such repairs thereof as may be needed to keep the same in good working order; secondly, to the pro rata payment of whatever may be justly due and payable under liens of any kind having priority over this indenture, in the order of their priority; thirdly, to the payment of interest overdue upon the said bonds, with interest upon the overdue interest; fourthly, to the payment of the principal of the said bonds, any surplus to be paid over to the railway company.

ARTICLE NINTH.

The trustee, upon becoming entitled to take possession of the railroads and property aforesaid, may, in its discretion, and must, on the written request of the holders of at least one-half in amount of the bonds hereby secured and then outstanding and unpaid, cause the railroads and property hereby mortgaged to be sold as an entirety, unless directed in writing, by the holders of two-thirds of all the bonds hereby secured and then outstanding and unpaid, to sell in parcels, subject to the liens of the said prior mortgages or deeds of trust, if the same shall not have been previously discharged, at public auction in the city of Troy, New York, to the highest bidder, giving at least ninety days' previous

notice of the time, place and terms of such sale, and of the specific property to be sold, and whether the same will be sold as an entirety or in parcels, by publishing such notice in two daily newspapers printed or published in the said city of Troy, and in two daily newspapers printed or published in the city of New York, once in each week for at least ten weeks during the said term of ninety days; and upon such sale being made, and the purchase money being paid, the trustee shall execute to the purchaser or purchasers a good and sufficient deed or deeds of convevance, in fee simple, subject, however, to the lien of any prior mortgage or deed of trust: which sale and conveyance shall be a perpetual bar, both at law and in equity, against the railway company, its successors and assigns, respectively, and all persons and corporations claiming or to claim any right, title, interest or estate in or to said railroads and property or any part thereof, whether the trustee be in possession thereof or not. And the receipt of the trustee for the purchase money shall be a full and sufficient discharge to the purchaser or purchasers; and no purchaser holding such receipt shall be liable for the proper application of the purchase money, or be in anywise bound to see that the same is applied to the uses of this trust, or be in any manner answerable for its loss or misappropriation, or be under obligation to inquire into the authority of the trustee for making such sale; and such sale to a purchaser in good faith shall be valid, whether the notice of such sale be given as herein required or not. The trustee shall have power to adjourn such sale from time to time in its discretion, and if adjourned one or more times, such sale may be made at the time and place to which it shall be last adjourned, without further notice.

Upon such sale being made, after deducting from the proceeds of the sale the costs and expenses thereof, and of the execution of this trust, and all payments for taxes, water rates, assessments and counsel fees, and the trustee's own reasonable compensation, the trustee shall apply so much of the remainder of such proceeds of sale as may be necessary to the payment of the principal and interest remaining unpaid on the bonds hereby secured, together

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with the interest upon the overdue interest down to the time of the sale, without giving any preference to either principal or interest; it being the intention of this indenture that so long as the said railroads and their appurtenances shall be managed by the trustee, or a receiver, as an operating railway, the income shall be applied to the payment of interest on the bonds hereby secured in preference to the principal; but that after a sale of the said railroads and their appurtenances, no such preference shall be made in the distribution of the proceeds. If any surplus shall remain after the payment in full of the principal and interest of the bonds hereby secured, the same shall be paid to the railway company.

ARTICLE TENTH.

Nothing herein contained shall be construed as limiting the right of the trustee to apply to the courts for judgment or decree of foreclosure and sale under this indenture, or for the usual relief in the course of such proceedings; and the trustee may, in its discretion, and must, if not allowed by law to proceed in the manner hereinbefore described, apply to any court of competent jurisdiction for relief by way of foreclosure or otherwise, if so advised by counsel, instead of taking possession of or selling said railroads and property, when required so to do by the bondholders; but in such case, the sale shall be made upon substantially such notice as is hereinbefore described.

No action shall be commenced or prosecuted against the Railway Company to foreclose this mortgage upon any of the bonds or coupons attached thereto, hereby secured, except by the trustee, as in this article provided, unless the trustee, upon the reasonable request of the holders of such bonds or coupons, accompanied by an offer of adequate indemnity against the expenses of the action, shall willfully refuse to bring such action.

ARTICLE ELEVENTH.

Upon any sale hereunder of the railroads and property hereby conveyed, the holders of the bonds hereby secured, or any of them, or the trustee, on behalf of all the bondholders, shall have the right to purchase upon equal terms with all other persons. Any

purchaser at such sale shall have the right, provided sufficient money shall be first paid to satisfy costs and all other charges, to use and employ, in the payment of the purchase price, any of the bonds and coupons hereby secured then outstanding and unpaid, to the payment of which the proceeds of such sale would be applicable, to the extent with such purchaser, as the holder of such bonds or coupons, would be entitled to share in the proceeds of such sale.

ARTICLE TWELFTH.

The Railway Company shall and hereby covenants and agrees with the Trustee that it will construct and complete all railways which it has already undertaken to construct, including branch lines and extensions, in a substantial manner, and will at all times maintain its lines of railway, bridges, car, power and station houses, buildings, engines, dynamos, elecetrical equipment, rolling stock and appurtenances, whether now owned or leased, or hereafter acquired, in as good order and condition as is usual with first-class electric street surface railway companies in the State of New York; and that it will, from time to time, make all needful and proper repairs, renewals, replacements, useful alterations, improvements and betterments to its railroads and railroad property, in such manner and to the end that the business of the Railway Company shall be preserved and developed.

ARTICLE THIRTEENTH.

In no case shall any claim, benefit or advantage be taken by the Railway Company of any valuation, extension, stay or relief laws, to prevent or hinder the entry, foreclosure or sale by or at the suit of the Trustee; and all benefits from such laws, whether now in force or hereafter enacted, are hereby expressly waived; nor shall the holder of any bond hereby secured have recourse for its payment upon any stockholder, officer or director of the Railway Company, in any event.

ARTICLE FOURTEENTH.

The Railway Company may, from time to time, dispose of any portion of the real or personal property covered by this indenture which may no longer be required for the due maintenance and No. 98.] 1935

operation of its railroads; and the Trustee shall thereupon release such property from the lien and effect of this indenture, upon the request in writing of the Railway Company, and proof by affidavit, or otherwise, to its reasonable satisfaction, that such property at the time of such request is unnecessary or unfit for use in the construction, operation, maintenance or repair of the railroads hereby conveyed; and the proceeds of all property thus sold shall be received by the Railway Company and applied by it in the purchase of additional property, when required for use in the operations of said railroads; and such additional property, when so purchased, shall become subject to the lien of this indenture.

ARTICLE FIFTEENTH.

All bonds secured by this indenture shall be payable to bearer and be negotiable and pass by delivery, unless registered, for the time being in the name of the owner thereof in the manner here-The Railway Company shall have an agency inafter provided. in the city of New York, for the payment of the principal and interest of said bonds, in which agency it shall keep a suitable book for the registry and transfer of said bonds, in accordance with the terms thereof, and of this indenture. The office of the Trustee shall be deemed to be such agency in the city of New York, unless the Railway Company shall establish a different agency, by a notice thereof, published daily for at least two weeks, in a newspaper published in the said city of Troy, and also in a newspaper published in the city of New York. On any registration of bonds in such book, a note of such registration shall be properly certified on such bonds; and no transfer of any bond so registered and certified shall be valid, unless made in writing in such transfer book, signed by the party registered as the owner thereof, or his legal representatives, or by his or their agent or attorney thereunto duly authorized. And every such transfer shall be entered upon said transfer book, so as to show the number of the bond transferred and the name and address of the transferee, unless such transfer shall be to bearer, in which case it shall be entered as transferred to bearer; and every such transfer shall be noted on the bond; and, if the last transfer be to bearer, the bond shall

thereafter be transferable by delivery; but every such bond shall be subject to successive registrations and transfers to bearer, as aforesaid, at the option of each holder. No charge shall be made to any bondholder for such registration or transfer.

The Trustee shall have free access to such transfer book at all reasonable times and hours, and shall, from time to time, on its written request therefor, be furnished by the Railway Company with a copy of all entries made therein.

ARTICLE SIXTEENTH.

In case any of the bonds secured hereby shall become mutilated, it shall be lawful, upon the surrender of any such bond to the Trustee, for the Railway Company to issue and the Trustee to certify or countersign a new bond bearing the same number, in lieu, substitution or exchange therefor; and the Trustee shall forthwith effectually cancel each bond so surrendered. And if any of the bonds secured hereby shall become lost or destroyed, it shall be lawful, upon satisfactory proof of such fact to the Trustee and to the Railway Company, and upon the giving of a good, sufficient and satisfactory bond of indemnity by the owner of such lost or destroyed bond to the parties hereto jointly, for the Railway Company to issue and the trustee to certify or countersign a new bond, bearing the same number, in place thereof.

ARTICLE SEVENTEENTH.

The Railway Company shall also keep at its agency, in the city of New York, a book which shall serve as a voting register for the holders of the said bonds, in which every holder of one or more of said bonds shall be entitled to have his or her name and address, and the numbers of the bonds held by him or her, entered, upon presenting such bond or bonds, or an affidavit containing a statement of said particulars, and of his or her ownership of the bond or bonds, which affidavit shall be duly verified by such holders before a proper officer, whose authority to take the affidavit shall be established in the manner provided by the laws of the State of New York.

The name of any person so registered shall be stricken from such voting register, whenever any one appearing in like manner to be the legal holder of all the bonds upon which such registry was made shall furnish satisfactory proof of the fact, and request his or her name to be entered in such voting register as aforesaid. The registration of the name and address of a bondholder, and the numbers of the bonds held by him or her, as well as the production of any bond not so registered, shall be evidence of the right of the person so registered or producing said bond, to vote as a bondholder, and to do any other act which, by this indenture, a bondholder is entitled to do in respect of said bonds. Reasonable notice of all bondholders' meetings shall be given by mail to bondholders thus registered. Any bondholder failing to register his or her bonds in his or her own name shall thereby forfeit all right to notice of any such meeting.

The Trustee may, in its discretion, and must, whenever required in writing by bondholders to the aggregate amount of 20 per centum of the bonds then outstanding, call a meeting of the bondholders to be held in the city of New York, by publishing notice thereof at least once a week for four weeks, in a newspaper published in the said city of Troy, and also in a newspaper published in the city of New York; and in case the Trustee shall neglect to call such meeting for 30 days after service upon it of such request, it shall be competent for any holder or holders of said bonds, to the aggregate amount aforesaid, to call such meeting in the manner aforesaid. At such meeting so convened, the bondholders shall be competent to exercise, in person or by proxy, all the powers and authority conferred upon them by this indenture, and each bond shall entitle the holder thereof to one vote. sonable regulations or by-laws in respect to such meetings may, from time to time, be established, altered or repealed by a majority of the bondholders in interest present, in person or by proxy, at any such meeting. The quorum may be fixed by such by-laws; but until so fixed, a majority of the holders of such outstanding bonds shall be required to constitute a quorum at any such meeting. The Trustee may require that any act or resolution of the

[Assembly, No. 98.]

bondholders at any such meeting, affecting its duties, shall be authenticated by the signatures of all the persons assenting thereto, as well as by a copy of the minutes of the meeting certified as correct by the chairman or secretary.

ARTICLE EIGHTEEN.

The trustee may take such legal advice and employ such assistance as may be reasonably necessary for the proper discharge of its duties, and shall be entitled to receive just compensation for all duties performed by it in the discharge of its trust, and to be reimbursed for all its reasonable expenses and disbursements, including the expense of attorney and counsel fees, clerk hire and services of agents; all which shall be paid by the railway company and be a lien upon and payable out of any funds coming into the hands of the trustee.

ARTICLE NINETEEN.

The trustee shall not in any way be held individually liable for any act or default of any agent or person employed by it in any capacity, or for any matter or thing except its own fraud or wilful misconduct. It shall only be required to exercise good faith upon its part in the performance of its duties and in the selection and appointment of such agent or employe.

ARTICLE TWENTIETH.

In case the trustee, or any trustee hereunder succeeding to its office, shall die, resign, be lawfully removed, or become insolvent or incapable of acting, a successor to such trustee may be appointed by the surviving or continuing trustee if any, with the consent of the board of directors of the railway company; or if there is no surviving or continuing trustee, or if no such appointment is made within thirty days after such vacancy occurs, then such appointment may be made by the holders for the time being of a majority in interest of the said bonds then outstanding, at a meeting of the said bondholders, duly convened and held in conformity with the provisions of this indenture. Such appointment, however, shall have no force or effect before any default in

the payment of coupon or interest on said bonds, until approved by the board of directors of the railway company. If any such vacancy is not filled within ninety days after it occurs, any judge of the supreme court of the State of New York, in and for the Third Judicial District, may appoint a trustee to fill such vacancy. upon a petition of the holders of the bonds hereby secured to the aggregate amount of 20 per centum of the bonds then outstanding, and upon twenty days' previous notice of such application to the railway company and to the surviving trustee, if any there be. The corporation, person or persons so appointed shall be the trustees under this indenture; and thenceforward each trustee so appointed shall be vested with the same powers, rights and interests and charged with the same duties and responsibilities as if he or it had been originally named as trustee and made a party to this indenture, in place of the trustee to whom he or it succeeds, without any further act or deed; but the surviving or remaining trustee, if any, shall nevertheless immediately execute all such conveyances or other instruments in writing, as may be necessary or suitable for the purpose of securing to the new trustee, so appointed, a full joint estate in the premises. trustee named herein or any future trustee may be removed by the vote of a majority of all the directors of the railway company, at any meeting of its board of directors, concurred in by a vote of the holders of a majority in value of all the outstanding bonds hereby secured, at a meeting of the bondholders convened as in this indenture provided.

ARTICLE TWENTY-FIRST.

The words "the trustee" or "trustee" wherever used in this instrument, shall be construed to mean the trustee for the time being, whether original, successor or substitute. The words "the railway company" used herein, shall be construed to mean the party of the first part, and shall include its successors and assigns; and the words "railroads and property" or "property," as used herein, shall be construed to embrace all property hereinbefore enumerated and described as being by this indenture conveyed.

ARTICLE TWENTY-SECOND.

The railroad company shall and will make, execute and deliver to the trustee all such further instruments and assurances as may from time to time be necessary, or as the trustee may be advised by counsel, learned in the law, to be necessary for the better securing of the trustee the railroads and property hereby conveyed, or intended so to be, and for carrying out the objects and purposes of this indenture.

ARTICLE TWENTY-THIRD.

If the railway company shall well and truly pay, or cause to be paid, unto the holders of the bonds hereby secured, the principal and interest to grow due thereon at the times and in the manner stipulated in said bonds and coupons and this indenture, according to the true intent and meaning thereof, and shall well and truly keep and perform all and singular the covenants, promises and conditions in said bonds and in this indenture contained to be kept and performed on the part of the railway company, then the estate hereby granted to the trustee shall be divested, and these presents shall cease, determine and become void; and the title to all the property hereby conveyed, both in law and in equity, shall revert to and revest in the railway company, its successors or assigns, without any acknowledgment of satisfaction, reconveyance, surrender, re-entry or other instrument or act; but in such event, the railway company, its successors or assigns, may demand, and the trustee shall thereupon be obliged to execute and deliver to the railway company, in such form that the same will be capable of being recorded, a proper instrument of reconveyance and release of the railroads and property hereby conveyed and a satisfaction piece of this mortgage as evidence of such reinvestment of title in the railway company.

ARTICLE TWENTY-FOURTH.

The trustee hereby accepts the trusts created and conferred upon it by this indenture, and covenants to exercise the powers and perform the duties herein set forth to the best of its ability, at the times, in the manner, and upon the contingencies herein mentioned.

ARTICLE TWENTY-FIFTH.

This indenture shall be executed in triplicate by the parties hereto.

In witness whereof, the Troy City Railroad Company, party of the first part, hath on the day and year first above written, caused its corporate seal to be hereunto affixed, and these presents to be subscribed in its corporate name, by its president, and attested by its secretary; and the Central Trust Company of New York, party of the second part, hath, also on the day and year first above written, for the purpose of testifying its acceptance of the trust hereby created, caused its corporate seal to be hereunto affixed, and these presents to be subscribed in its corporate name by its president, and attested by its secretary.

TROY CITY RAILWAY COMPANY,

[L. S.]

By C. CLEMINSHAW,

Attest:

President.

JOSEPH J. HAGEN,

Secretary.

CENTRAL TRUST COMPANY OF NEW YORK,

Trustee.

[L. S.]

By F. P. OLCOTT,

Attest:

President.

C. H. P. BABCOCK,

Secretary.

STATE OF NEW YORK, COUNTY OF RENSSELAER.

Be it remembered, that on this first day of December, in the year of our Lord one thousand eight hundred and ninety-two, before me personally appeared Charles Cleminshaw, the president, and Joseph J. Hagen, the secretary of the Troy City Railway Company, both to me personally known, and known to me to be respectively such president and secretary, who being by me severally duly sworn, did, each for himself, depose and say, that the said Charles Cleminshaw, resides at the city of Troy, in said county and State, and is the president, and the said Joseph J. Hagen

resides at Lansingburgh, in said county and State, and is the secretary of the Troy City Railway Company, described in and which executed the foregoing instrument; that he knows the corporate seal of said company; that the seal affixed to the foregoing instrument is such corporate seal; that it was so affixed by order of the board of directors of said company; that the said Charles Cleminshaw signed the corporate name of said company to the foregoing instrument as such president, by the like order, and that the said Joseph J. Hagen signed his name to said instrument as such secretary, by the like order in attestation of the due execution thereof.

CHARLES H. VAIL,

[L. S.]

Notary Public, Rensselaer Co., N. Y.

STATE OF NEW YORK,
CITY AND COUNTY OF NEW YORK,

Be it remembered, that on this first day of December, in the year of our Lord, one thousand eight hundred and ninety-two, before me personally appeared F. P. Olcott, the president, and C. H. P. Babcock, the secretary, of the Central Trust Company of New York, both to me personally known, and known to me to be respectively such president and secretary, who, being by me severally duly sworn, did, each for himself, depose and say, that the said F. P. Olcott resides at the town of Bernards, New Jersey, and is the president, and the said C. H. P. Babcock resides at Riverdale, N. Y., and is the secretary of the Central Trust Company of New York, described in and which executed the foregoing instrument; that he knows the corporate seal of said company; that the seal affixed to the foregoing instrument is such corporate seal; that it was so affixed by order of the board of directors of said company; that the said F. P. Olcott signed the corporate name of said company to the foregoing instrument as such president by the like order, and that the said C. H. P. Babcock signed his name to said instrument as such secretary by the like order, in attestation of the due execution thereof.

[L. S.]

FRANK B. SMIDT,

Notary Public (276) N. Y. Co.

STATE OF NEW YORK,
CITY OF TROY, RENSSELAER COUNTY.
CLERK'S OFFICE.

I, Charles E. Greenman, clerk of said county, and also clerk of the Supreme Courts, being courts of record held herein, do hereby certify that Charles H. Vail, whose name is subscribed to the certificate of proof of acknowledgment of the annexed instrument, was, at the time of signing the same, a notary public in and for the county of Rensselaer, dwelling in said county, duly commissioned and sworn, and authorized to take the same; that I am well acquainted with the handwriting of the said notary, and verily believe that his signature to the said certificate of proof of acknowledgment is genuine, and that said instrument is executed and acknowledged according to the laws of the State of New York.

In testimony whereof, I have hereunto set my hand and affixed the seal of said court and courts this 2d day of December, A. D. 1892.

[L. s.]

C. E. GREENMAN,

Clerk.

STATE OF NEW YORK, CITY AND COUNTY OF NEW YORK.

I, William J. McKenna, clerk of the city and county of New York, and also clerk of the Supreme Court for the said city and county, the same being a court of record, do hereby certify, that Frank B. Smidt, whose name is subscribed to the certificate of the proof of acknowledgment of the annexed instrument, and thereon written, was, at the time of taking such proof or acknowledgment, a notary public in and for the city and county of New York, dwelling in the said city, commissioned and sworn, and duly authorized to take the same. And, further, that I am well acquainted with the handwriting of such notary, and verily believe that the signature to the said certificate of proof of acknowledgment is genuine.

In testimony whereof, I have hereunto set my hand and affixed the seal of the said court and county the 1st day of December, 1892.

[L. S.]

WILLIAM J. McKENNA.

Clerk.

STATE OF NEW YORK, RENSSELAER COUNTY.

I, Charles E Greenman, clerk of the county of Rensselaer, do hereby certify, that the foregoing mortgage or deed of trust executed by the Troy City Railway Company to the Central Trust Company of New York, as trustee, was received by me for record, on the 2d day of December, 1892, at 9.45 a. m., and was by me duly recorded in my said office, on the same day and hour, in Book of Mortgages No —, at pages —, etc.

Witness my hand and official seal.

[L. S.]

C. E. GREENMAN,

Clerk of Rensselaer County.

STATE OF NEW YORK, ALBANY COUNTY.

I, A. C. Requa, clerk of the said county of Albany, do hereby certify that the foregoing mortgage or deed of trust, executed by the Troy City Railway Company to the Central Trust Company of New York, as trustee, was received by me for record, on the 2d day of December, 1892, at 11.06 a. m., and was by me duly recorded in my said office, on the same day and hour, in Book of Mortgages No. —, at pages —, etc.

Witness my hand and official seal.

[L. S.]

A. C. REQUA,

Clerk of Albany County.

STATE OF NEW YORK, SARATOGA COUNTY.

I, Edward F. Grose, clerk of the said county of Saratoga, do hereby certify, that the foregoing mortgage or deed of trust, executed by the Troy City Railroad Company to the Central Trust Company of New York, as trustee, was received by me for record, on the 2d day of December, 1892, at 2.05 p. m., and was by me duly recorded in my said office, on the same day and hour, in Book of Mortgages No. 154, at pages —, etc.

Witness my hand and official seal.

[L. S.]

EDWARD F. GROSE,

Clerk of Saratoga County.

EXPLANATORY MEMORANDA.

July 27, 1895.

The Hon. S. F. Nixon, Chairman of the Assembly Investigating Committee:

Dear Sir.—Referring to the indebtedness of the Brooklyn Heights Railroad Company:

Joint collateral trust notes were made by the Brooklyn Heights Railroad Company and the Long Island Traction Company. authorized issue of these notes was three million dollars (\$3,000,-000), and it was arranged that \$1,875,000 was to be sold at 80 per cent. at par to net \$1,500,000, the proceeds paid into the New York Guaranty and Indemnity Company, as financial agents. moneys were transferred by them to the credit of the disbursing The disbursing committee paid the bills for construccommittee. tion as presented, from time to time, on certificates signed by the president of the Brooklyn City Railroad Company, the president of the Brooklyn Heights Railroad Company, and the president of the Long Island Traction Company, and sworn to by the chief engineer of the Heights Company, showing that all items were account of construction. The par value of the notes were charged against bills payable, the 80 per cent. in cash was charged to the New York Guaranty and Indemnity Company or the disbursing committee, who finally received the funds; and 20 per cent. was charged to discount, as shown on statement.

The cash on hand is charged to disbursing committee and the New York Guaranty and Indemnity Company, as appears on the balance sheet. The issue for the account of construction is about completed. The difference between the \$1,845,409.10 and \$1,875,000 is all that remains to be issued. The funds can be used for no other purpose, except for conversion or construction.

The promissory notes shown in the statement, \$642,008.49, is composed as follows:

Six hundred and six thousand four hundred and sixty-two dollars and thirty-three cents, notes made by the Brooklyn Heights Railroad Company and the Long Island Traction Company, the face value of which were paid out for account of construction. At the time of the making of these notes, the Brooklyn City Railroad Company had open large contracts for construction of power stations, for which it was liable, and to prevent litigation against that company, it paid the Heights Company and disbursing committee the funds which were used in discharging this contract indebtedness. The Brooklyn City Railroad Company had real estate not necessary for the operation of the electric roads after conversion — about \$715,000; and personal property which was not needed, in the way of old horse gear, approximately, \$200,000. It was arranged that, as fast as either real or personal property was sold, the proceeds would be used to pay off and discharge this obligation, and if any balance remains, to the discharge of other obligations given on account of construction.

Some weeks ago the Brooklyn City Railroad Company demanded payment of these notes. The Heights Company then arranged with Messrs. Flower & Co. to take the loan at the face, relieving the Brooklyn City. As before stated the amount of the obligation was \$606,462.33. About the middle of March, interest was due on some of the obligations of the Heights Company and the Traction Company, which the Heights Company was unable to pay, because of want of funds, and the Traction Company loaned to them \$16,546.16, which was used in the payment of that obligation, thus relieving the Traction Company of litigation and consequent judgment on that account.

The further promisory note of \$19,000 is held by the People's Trust Company of Brooklyn. This obligation was given by the Heights Company in its early history, and is secured by mortgages upon certain real estate.

The \$606,462.33, \$16,546.16 and \$19,000, as before stated, comprise the item of indebtedness as shown in the statement—\$642,008.49.

The item of \$250,000 is the acknowledged indebtedness of the Heights Company for \$250,000 taken from the guarantee fund as provided in the lease.

The \$350,000 is composed of \$300,000 borrowed to pay the rent on the first day of April on the order of the United States Circuit Court, and \$50,000 derived on the 29th day of June in the same

manner, certificates having been sold at par and the proceeds directly applied to the payment of rental.

The Brooklyn City Railroad construction account — \$2,017,760.02 in the general balance sheet is somewhat greater than the statement of construction account shown on page 1. This is caused by the deduction of the account by credit of the sale of old material.

Accrued interest — \$45,154.20 is the earning of the guaranty fund accrued, but not payable. By the terms of the lease, the proceeds or earnings of the guarantee fund were paid to the Brooklyn Heights Railroad Company. The guaranty fund is invested in bonds, the coupons of which are payable in January and July. The earnings of the guarantee fund are \$182,000 per annum.

Discount account — Item, as shown on balance sheet, is \$409,557.65, which is composed of 20 per cent. of the issue of collateral trust notes and the expense of the issue of said notes. It will be noted that this item is not charged against the construction account, but it is held subject to adjustment in the future.

Deficiency, as shown on this sheet, is the deficiency of the Brooklyn Heights Railroad Company since its organization.

Loans and bills payable, as shown in the liabilities, \$2,972,748.53, has been increased to the amount shown in the statement by the issue of collateral trust notes, receiver's certificates, etc.

Interest on bonds and floating debt, due and accrued, is the interest accrued and not payable on collateral trust notes and other obligations of the company. It is presumed that all other items on the statement are clear without explanation.

For the information of the committee I submit hereafter a comparison of prices paid for equipment, etc., by the Brooklyn Heights Railroad Company.

I find in 1894 \$590 was paid for the most improved car body, the Brooklyn City Railroad Company having paid for a similar car body in the spring of 1893 \$625.

The Brooklyn Heights Railroad Company paid for closed car bodies in 1893 to the St. Louis Car Co., \$1,035 each; the Pullman Co., \$1,061 each, and the Lewis & Fowler Co., \$1,050. I am in-

formed that these cars were practically of the same design and finish. I saw the proposals made to the company for the foregoing cars. I find that the Stevenson Company bid \$1,325 per car, the Brill Company, \$1,125 per car, and the Junes Company, \$1,175 per car, all on the same specifications.

I find that the Brooklyn City Railroad Company bought electric car bodies in 1892 and paid the Brill Company \$1,175 per car.

I find that the Brooklyn Heights Railroad Company bought electric car trucks in 1893 and paid the Peckham Motor Wheel and Truck Company \$247.50. I saw the proposal of the Brill Company to furnish trucks for \$265.

I noticed that the Brooklyn City Railroad Company paid for trucks in 1892 \$290 each, and in 1893 \$260 each.

I find that the Brooklyn Heights Railroad Company purchased material in the summer and fall of 1893 of the General Electric Company for \$1,308 per car equipment complete.

I saw the proposal of the Westinghouse Company, and their proposition was \$1,598 per car equipment.

I find that the Brooklyn Heights Railroad Company bought 120 double motor car equipments in 1894 of Curtis Company, and paid \$900 per car complete.

The Brooklyn City Railroad Company purchased motors in 1891 and 1892 for \$2,400 per car equipment, and in the spring of 1893 paid \$1,700 per car equipment. This latter price, I find, that the order was placed with the General Electric Company, the Curtis Company and the Westinghouse Company, all had the price of \$1,700 per complete car equipment.

I find that the Brooklyn City Railroad Company purchased in the fall of 1893 electric snow plows, which were built by the Pullman Company, at \$591, and complete, and that they purchased electric sweepers of the Lewis & Fowler Company, which, I am informed, were made on the plans submitted by the company, at \$1,275 each, and later were purchased at \$1,050 each.

I find that electric iron poles were purchased on competition at various prices, showing a reduction in price by the Heights Company. I find that copper wire was purchased in competition, and that the prices show material reduction as purchased by the Heights Company.

In examination of prices of rail, I find that only a small quantity was purchased by the Heights Company, that the price of 1.17 per foot was paid to the Lewis & Fowler Girder Rail Company, and that a quantity of the Johnson rail was paid for at the same time at 1.25 per foot.

I find that the principal contracts for the erection of power stations were let by the executive committee of the Brooklyn City Railroad Company, and that the Heights Company had simply carried out the plans and contracts so made.

These contracts were with the General Electric, E. P. Allis & Co., Babcock & Willcox Company, Mackintosh & Seamer, Boston Bridge Works, Fuel Economizer Co., and numerous smaller institutions, the work being let on competition.

The number of cars in operation on line at this date is between 600 and 700, depending upon the necessities of the public.

The daily passenger receipts for the year ending June 30, 1894, was approximated at \$11,000 per day.

I find by examination of the stock ledger of the Brooklyn Heights Railroad Company, that the stock stands in the name of the Long Island Traction Company, and that the directors are as follows:

The Long Island Traction Company	1,987
C. L. Rossiter	1
T. S. Williams	• 1
D. F. Lewis	1
C. Hadden	1
Felix Campbell	1
J. Englis	1
S. B. Dutcher	1
T. S. Jackson	1
C. N. Hoagland	1
C. F. Young	1

1950

Respectfully submitted, (Signed) F. BOSTWICK,

Accountant.

[Assembly,

- Q. What did the Atlantic Avenue Railroad Company pay for the Brooklyn, Bath and West End stock? A. The Atlantic Avenue Railroad Company paid \$1,043,825 (according to the books) for the stock of the Brooklyn, Bath and West End Railroad Company.
- Q. How was said payment, if any, made; in cash or otherwise? A. Sixteen thousand and ninety shares of the capital stock of the Atlantic Avenue Railroad Company was issued; \$239,275 was taken care of by the Brooklyn Traction Company, on account of the Atlantic Avenue Railroad Company; this was not a cash transaction.
- Q. What was done with the money realized on increase of indebtedness of two companies? A. The money realized from the increase of the indebtedness of the two companies was used to construct and equip the line electrically.
- Q. At what price or prices were the bonds of the two roads sold; that is, the bonds issued on the increase? A. The improvement mortgage bonds of the Atlantic Avenue Railroad Company, \$1,500,000, were sold for \$1,290,000, or 86 per cent. The bonds of the Brooklyn, Bath and West End Railroad Company, \$448,000, were taken equivalent to par by the Atlantic Avenue Railroad Company, according to contract, for re-equipping and constructing.
- Q. Ascertain just what the books of each company show relating to the increase of stock? A. The account of capital stock on the Atlantic Avenue Railroad Company's books shows an increase of \$804,550 on account of purchase of the Brooklyn, Bath and West End Railroad Company's stock; the Brooklyn, Bath and West End Railroad Company's stock account shows an issue of

\$52,000 common stock to take up a like amount of preferred stock outstanding; also, an issue of \$448,000 to Brooklyn Traction Company, as per contract made November 11, 1893, proceeds of same to be used in the electrical construction and equipping of the Brooklyn, Bath and West End Railroad Company's road.

- Q. How was the increase of stock paid for, if at all? A. The increase of capital stock on the part of the Atlantic Avenue Railroad Company was paid for in exchange for stock of the Brooklyn, Bath and West End Railroad Company; the increase of Brooklyn, Bath and West End Railroad Company's stock was paid for by the electrical construction and equipment (in part) of the road by the Atlantic Avenue Railroad Company.
- Q. How was the money used, if any, realized on the increase of capital stock? A. Increased capital stock issue of the Atlantic Avenue Railroad Company was used in the purchase of the stock of the Brooklyn, Bath and West End Railroad Company; in the case of the Brooklyn, Bath and West End Railroad Company, the stock was used (in part) to construct and equip the road electrically.
- Q. If any money was paid into the company on increase of capital stock, when, and in what bank, if any, was it deposited? A. The preceding answer answers this question.

This agreement, made this second day of December, in the year of our Lord one thousand eight hundred and eighty-five, by and between the Kings County Elevated Railway Company, a corporation organized and existing under and by virtue of the act of the Legislature of the State of New York, passed June 18, 1875, entitled "An act further to provide for the construction and operation of a steam railway in the counties of this State," and the amendments thereof, the party of the first part, and Henry Bradlee, and others, whom he has now associated and whom he may hereafter associate with himself in this behalf, the parties of the second part, the contractors; witnesseth:

Whereas, The said Railway Company was organized to construct and operate an elevated railway or railways over, upon, through, along, and across certain streets, avenues, places, high-

ways and lands in the county of Kings, in the State of New York, comprised in the several separate and distinct routes prescribed for the Railway Company as located by commissioners appointed for that purpose under the act hereinbefore mentioned; and,

Whereas, The Railway Company is under the provisions of the said act, authorized to construct and operate such railway or railways as aforesaid, provided the consent of the owners of one-half in value of the property bounded on, and the consent also of the local authorities having control of, that portion of a street or highway upon which it is proposed to construct or operate such railway or railways, be first obtained, or, in lieu of the consent of such property owners, the determination of commissioners, confirmed by the General Term of the Supreme Court in and for the Second Judicial Department, be first obtained in the manner prescribed by the said act; and,

Whereas, The consent of the common council of the city of Brooklyn to the construction and operation by the Railway Company of its railway or railways upon, over, through and along the several streets, avenues, highways, and places so located for the Railway Company by the said Transit Commissioners, was, on or about the 30th day of June, 1879, given upon certain terms and conditions; and,

Whereas, Acting in conformity to the spirit of an interlocutory decision by the said Supreme Court in a certain application thereto on behalf of the said Railway Company, which declined to confirm the said report of the Rapid Transit Commissioners in the manner and to the extent as thereby reported, the said Railway Company applied again to the common council of the city of Brooklyn for a renewal and modified consent, in pursuance of the statute, to construct and operate a railway or railways, which consent was by its certain resolutions adopted on the 28th and on the 31st day of December, 1883, and approved on the 10th day of January, 1884, by the mayor, given as and for the following described ways and routes;

Resolved, That consent be and the same is hereby given to the construction and operation by the Kings County Elevated Rail-

way Company of an elevated railway or railways over, upon, through and along the following streets and avenues, included in the following separate and distinct routes, respectively (the same forming part only of the several routes fixed, determined and located by the Rapid Transit Commissioners for the purposes of such railways), that is to say:

- 1. Beginning on and over Fulton street at the Fulton ferry; and thence over, upon and through and along Fulton and Water streets to Adams street; and thence over, upon, through and along Adams street to Myrtle avenue; and thence over, upon, through and along Myrtle avenue to Broadway; and thence over, upon, through and along Broadway to the boundary line between the city of Brooklyn and the town of New Lots.
- 2. And, also, beginning on and over Fulton street at the Fulton ferry; and thence over, upon, through and along Water street to Washington street; thence over, upon, through and along Washington street to Sands street; thence over, upon, through and along Sands street to Adams street; thence over, upon, through and along Adams street to Myrtle avenue; and thence over, upon, through and along Myrtle avenue and Broadway, as above mentioned, to the boundary line between the city of Brooklyn and the town of New Lots.
- 3. And, also, again beginning on and over Fulton street at the Fulton ferry; thence over, upon, through and along Fulton street to Myrtle avenue, and thence over, upon, through and along Myrtle avenue and Broadway as above mentioned.
- 4. And, also, over, upon, through and along so much of York and Prospect streets as is situated between Fulton and Adams streets, and so much of Sands street as is situated between Washington and Adams streets. But this consent shall not allow the railway on York or Prospect streets to be built so as to intrude upon, or to interfere with, the structure of the bridge.
- 5. And, also, a connection with the railway laid over the East River bridge for cars to be operated or propelled by steam or other motive power, as the same shall be from time to time deter-

mined or provided by the authorities having control of the said bridge.

- 6. And, also, beginning at the intersection of Myrtle avenue with Hudson avenue; and thence over, upon, through and along Hudson avenue to Fulton street; and thence over, upon, through and along Fulton street to the boundary line between the city of Brooklyn and the town of New Lots.
- 7. And, also, over, upon, through and along that portion of Fulton street that extends between Hudson avenue and Myrtle avenue.
- 8. And, also, beginning at the ferries at the foot of Broadway, and thence over, upon, through and along said Broadway to its junction with Myrtle.
- 9. And, also, over, upon, through and along so much of Second street as lies between Broadway and Grand street.
- 10. And, also, beginning at the intersection of Fulton street with Hudson avenue, and thence over, upon, through and across Fulton street and the intermediate land to Flatbush avenue; and thence over, upon, through and along Flatbush avenue to Atlantic avenue.

Provided, however, nevertheless, that the consent of the owners of a majority in value of the property bounded upon the portion of Fulton street between York street and Myrtle avenue, and of the property bounded upon the other portion of Fulton street between Myrtle avenue and Hudson avenue, and of the property bounded upon the portion of Broadway between the ferries at the foot thereof and Myrtle avenue, shall be in each instance first obtained; and this consent shall not be or become operative as to the last mentioned two portions of Fulton street, or upon the last mentioned portion of Broadway, respectively, until such consent of the owners of property bounded upon such several portions of the said streets, respectively, shall be so obtained.

And provided, further, that no action of the Supreme Court or of commissioners appointed thereby in lieu of the consent of property owners, or otherwise, shall make the consent hereby given as to the said two portions of Fulton street last mentioned, or the No. 98.] 1955

said portion of Broadway last herein mentioned, in any manner inoperative.

Provided, further, that between Sands street and Myrtle avenue this consent is limited to a single line of double-track railroad, to be built upon either of the two routes above provided, as the company may elect; and between Sands street and Fulton ferry a double-track road, or two single-track roads, may be built upon either of the routes hereinbefore provided, or parts of each, as the company may elect; and between Sands street and Fulton ferry the company, if it shall purchase property or rights of way outside of streets or avenues, may build or operate a railroad upon and across the property so purchased, and the intervening streets. When, by the routes or means here provided, two tracks, with necessary switches and turnouts, have been put in operation between said ferry and Myrtle avenue, no further or other railroad shall be deemed to be authorized by these resolutions upon either of said three routes between said ferry and Myrtle avenue, or upon any portion of such routes.

Provided, further, that so far as the said Railroad Company, its successors or assigns, shall be unable to agree with the owners of any property bounded upon the said streets or avenues embraced in this consent, or any of them, for the use thereof as aforesaid, it or they shall make due compensation to such owners, to be ascertained, in the event of disagreement, in accordance with the provisions of chapter 606 of the Laws of 1875, and such amendments thereto as have been made applicable to the said company.

Resolved, That whenever either of the routes herein mentioned and to which this consent is made applicable, as aforesaid, crosses any streeet, avenue, place or lands, such route includes, and is intended to include, such crossing in each instance, together with so much of every street, avenue, place or lands as is crossed, so as to allow and enable the construction and operation of continuous and connected lines of railway along the route so crossing.

Resolved, That whenever either of the routes hereinabove mentioned, and to which this consent is made applicable, is stated to commence or end at the intersection of any street or avenue upon

which a route has been designated, such route shall be deemed to commence or to end, as the case may be, at the railway which shall be constructed on such street or avenue at which such route begins or ends, and so as to form a connection between the railways on such intersecting streets or avenues.

Resolved, That this consent of this common council is expressly limited and restricted to the several separate and distinct routes hereinbefore specifically enumerated and described, and as modified by the provisions hereinbefore specified.

Resolved, That unless the work of construction upon some one or more of the several railways in and upon the specified routes hereinabove mentioned, and to which this consent is made applicable, shall be actually commenced on or before September 1, 1884, and the said several railways shall be respectively completed and in active operation within two years thereafter, this consent shall be and become thenceforth wholly inoperative and nugatory as respects the portions of the routes of such railway or railways that shall not have been so completed and in actual operation. But the time that shall be unavoidably consumed by actually pending legal proceedings hostile to the said company and preventive of the construction of any portion of the railways, shall not be deemed in any wise a part of such two years; and the time, if any, in which such unavoidable delay shall continue, shall be added to the said period within which such railways are required to be completed.

Resolved, That this consent is given upon the condition that the said company shall, by the acceptance of this consent, become and be obligated to pay into the city treasury for the benefit of the city, semi-annually, on the first days of January and July in each and every year, from and after the expiration of the period of five years, dating from the day of the first operation of their railways, 2 per centum of the gross receipts arising from the operations of such railways, and in the event of any default in the payment of any of the said sums, and the continuance of such default for the period of 30 days after the demand shall have been made therefor upon the said company, its successors or

assigns, this consent shall cease and become inoperative and of no effect. Such payments so being made, no further or other payments into the city treasury shall be required to be made by the said company, its successors or assigns, excepting in discharge of such taxes, assessments or water rates, as shall be lawfully levied or imposed upon any of the properties of the said Railroad Company, its successors or assigns.

Resolved, That this consent is given upon the further condition that if, at any time after the actual construction of the railways hereinbefore mentioned, any other company or companies shall become properly authorized to and shall construct and operate elevated railways that shall intersect the railways to which this consent relates to any point within one mile of the ferries at the foot of either Fulton street or Broadway, the portion of the railways hereinbefore mentioned, extending from the point of such intersection to such adjacent ferry, or to the New York and Brooklyn bridge, may be jointly used by this and such other companies, upon such terms as shall be fixed therefor by commissioners to be appointed by the General Term of the Supreme Court of this Judicial Department in proceedings to be taken for that purpose, similar to those provided for in the General Railroad Act or upon such terms as shall be fixed therefor by the Railroad Commissioners of this State.

Resolved. That with the view of protecting the city against such damage as it might sustain in the event that, after the work of the construction of any of the elevated railways hereinbefore mentioned shall have been commenced, the same shall not be actually completed within the period of time hereinbefore specified, and there shall thus be left an uncompleted structure, not in readiness for operation, this consent is given upon the further condition that the said Railway Company shall, before it shall commence the work of the actual construction of the said railways, deposit in escrow with such trust company, in the city of Brooklyn or New York, as shall be designated therefor by the mayor of this city, so many of the bonds of the said company forming part of the issue of its bonds that shall be secured by a mortgage that shall be the

first lien upon the company's properties, rights, powers, privileges and franchises, as shall have the par value of \$1,000,000, with all coupons or warrants for interest thereto attached, that shall mature subsequent to September 1, 1886. Such escrow deposit shall be thus made upon such terms that, as each mile of structure shall be fully completed, the said trust company shall forthwith deliver over to the said Railway Company, its successors or assigns, or as it or they shall or may direct, so many of the said bonds, with all coupons thereto attached, as shall have the par value of \$100,000. and, upon the actual completion and commencement of operation of any one system of railway extending from the Fulton ferry or the New York and Brooklyn bridge to the city limits, the whole then remainder of such bonds and coupons without deductions in any wise; while in the event that no one system of railways shall have been completed or be in operation within the period of time so specified as above mentioned, between the Fulton ferry or the New York or Brooklyn bridge and the city limits, then upon the full expiration of such period, the said trust company shall deliver over to the commissioners of the sinking fund of the city of Brooklyn whatever balance of such bonds and coupons shall then yet remain in the hands of such trust company, and such balance of bonds and coupons shall be thereupon held and disposed of by the said commissioners of the sinking fund to such extent as shall or may be required in order to fully indemnify and protect the city against, and provide for the payment and discharge of such damages as the city shall or may sustain by reason of the partial construction, but actual non-completion or operation of one complete system of railways between the points above specified, within the period of time hereinabove limited therefor. Any overplus of bonds and coupons, or the proceeds thereof, beyond the amount required to fully meet and discharge the damages the city shall thus sustain, shall belong to and to be delivered over to the said Railway Company, its successors or assigns. At any time while such escrow deposit shall continue to any extent, the company, its successors or assigns, may, at its or their option substitute in lieu of the whole or any number of the bonds yet remaining in the hands

of the trust company as the subject of said escrow, cash, at the rate of 75 per cent. of the par value of such bonds. Any such substitute shall be held and disposed of in all respects in like manner, at the like times, upon the like terms, and to the like extent, as would have been the bonds and coupons themselves for which such substitution shall have been made; and,

Whereas, The said Railway Company, in pursuance of an application made by and on its behalf to the mayor of the city of Brooklyn, and to the commissioner of the department of city works, as empowered and authorized by the provisions and conditions of the act of the Legislature of the State of New York, passed, June 15, 1881, chapter 518, entitled "An act in relation to the streets of the city of Brooklyn," had received and accepted the official consent, as therein provided, and as provided likewise by the law under which the said Railway Company is incorporated and organized; and,

Whereas, The said Railway Company is desirous of contracting for the construction, equipment and completion of the said railway or railways, and is willing, in order to accomplish the purposes of its organization, and in order to raise means for those purposes, to issue its bonds, and secure the same by mortgage of its entire properties and franchises; and,

Whereas, The said contractors are ready and willing to contract for the complete construction, furnishing and equipping of the said railway or railways and appurtenances authorized and required to be built as aforesaid within the periods allowed by law and prescribed by the authorities designated by law to fix the same, or of so many and of such portions of the railway or railways and appurtenances as can or may be constructed and operated within the times and terms so prescribed therefor;

Now, therefore, this agreement witnesseth, That, for and in consideration of the premises and agreements, on the part of the said Railroad Company and of the said contractors respectively, hereinafter particularly mentioned and contained, and of the sum of one dollar lawful money of the United States of America and other sufficient value, to each party hereto in hand paid by the other, the

receipt of which is hereby acknowledged, the said party hereto of the first part, for itself, its successors and assigns, and the said parties hereto of the second part, for himself and his said associates, do hereby respectively promise, covenant and agree to and with each other in manner following, that is to say:

The said Railway Company having, by the consent and the usual permit of the local authorities having control and regulation of the use of the streets in the city of Brooklyn, been further licensed and permitted, under the provisions of the local laws, to proceed to construct, lay and erect its said described railway or railways upon the said route from the line of the town of New Lots, along, upon and through Fulton street, to its intersection with Adams street, the said contractors agree to and shall forthwith proceed to construct, lay and erect a complete elevated railway structure thereon, with all necessary piers, supports, sidings, switches, turnouts, crossovers, signal telegraphs, terminal facilities, passenger stations, engine houses, fuel and water stations, depots, platforms, stairways, shops, and the usual tools and machinery, and all necessary appurtenances, and to furnish and equip the same with sufficient cars, locomotive engines, and all other appliances necessary to the business of conveying passengers, or mails thereon, over, in, upon and through the said route, as comprised among those fixed as above mentioned for the said Railway Company. Such work shall be in every respect executed within the times prescribed therefor respectively, by law or by authority designated by law to fix and determine the same, and in a workmanlike manner, and of the best materials; and shall conform to the requirements and conditions of the plans and specifications of the said Rapid Transit Commissioners, which are hereby incorporated and constitute an essential part of this contract, and hereto subjoined as such part, with like effect in all respects as if the same were here inserted at length; and such work shall likewise conform to the detailed plans, profiles, alignments, layouts and specifications of the said Railway Company's chief engineer and by and under the directions and supervision of the said engineer.

The amount of the equipment so to be furnished shall aggregate five locomotive engines and 15 passenger cars a mile for the said Fulton street route.

The said company shall at its own cost and expense provide for the entire rights of way through any and all private property that shall or may be used in or in connection with the construction or operation of the said railway or railways. The said company shall, also, at its own cost and expense provide and pay for such houses or lots of land as shall or may be necessary or convenient for use as depots, and for the construction of the necessary terminal facilities, and for stations of adequate capacity not more than half a mile apart, and at such convenient places along the lines of railway as shall be determined and required by the chief engineer of the said Railway Company.

The said contractors shall at their own cost and expense erect suitable machine shops and repair shops, engine houses, fuel and water stations at like convenient localities to be determined and required in like manner. The machine and repair shops shall be provided with proper, necessary and usual tools and machinery.

And, generally, the contractors shall fully do and perform all and everything whatsoever that shall be or become necessary, in order that the said railways so to be built hereunder shall be completed, furnished, equipped and fitted with suitable first-class rolling stock and machinery ready for use, including a first-class telegraph system on the entire line, connecting such of the stations as may be desired, and the machine and repair shop with the principal office of the said Railway Company in the city of Brooklyn.

The contractors shall begin construction within 25 days next ensuing after the said date of this contract. The contractors shall proceed thenceforth regularly and diligently and as fast as the work can properly and orderly be proceeded with. The time during which the contractors shall be hindered or delayed from actually proceeding with the work by injunctions, or restraints, or other adverse legal proceedings, shall form no part of the period limited for the work of construction.

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As it is to be contemplated that interest upon some of the bonds of the said Railway Company may accrue and become payable before the Railway Company can be in receipt of money sufficient to provide for the payment thereof out of the net earnings of its railways completed and in operation; therefore, any deficiency for such purpose which may arise from delays in net earnings shall be promptly advanced and paid by the said company.

The said Railway Company by its proper officers, agents and representatives, and according to law, and from time to time upon request of the contractors, shall and will do and perform all and every act, matter and thing that shall or may be necessary and proper to be done, or which can be done in its corporate capacity alone, to enable the contractors to perform any of their engagements under this contract.

The said contractors, they or their assigns, as the said covenants. obligations, engagements and agreements on their part, hereinbefore mentioned, are by them performed and completed, shall, by the said company, be paid therefor at and after the rate of \$500,000 in the first mortgage bonds of the railway company, designated series A, at par value, or in cash, at the option of the said contractors for each and every mile of said railway completed, finished and equipped. Payments on account shall be made upon the production to the treasurer of said railway company, or within five days thereafter, of the certificate of the chief engineer of the railway company specifying the amount of materials furnished and work done or ready for delivery; and the said payments on account shall be in the proportion that is so certified to be the proportion that the actual work done and materials furnished bear to the aggregate of the materials to be furnished and work to be done on the whole of the destinct and designate route which is then being in process of construction and erection. And when the contractor shall have completed ten miles of said railways, the said railway company being thereby then lawfully authorized by the provisions of its charter and franchises to increase its capital to an amount not exceeding \$500,000 for each and every mile constructed and operated, then, and in that case, the said railway

company shall issue and deliver, of such increased capital stock to the said contractors, and in addition to all other sums hereinbefore provided, at and after the rate of \$400,000 for each and every mile of railways so constructed and operated beyond the said first two miles; and the said amounts of the increased capital stock shall be full paid; and the said cash and stock shall be received for and in full payment of all sums and claims due or coming to the contractors under or by the terms of this agreement.

In every instance in which mention is made in this contract of a "mile" of railway the intention is to designate a mile of double-track railway. Nevertheless, in every case in which sidings or turnouts are provided for by the provisions of this contract they shall be included as part of the aggregate length of the railways to be constructed, and shall be measured as single-track equivalent to one-half the length of double-track.

It shall not be compulsory for the contractors to build, under this contract, more of the fourteen mile system than the route of railways from New Lots (the city limits), along and through Fulton street to its intersection with Adams street, and thence, if the company is thereunto lawfully enabled, and if necessary and convenient, through Adams street to its intersection with Myrtle avenue, or further along Fulton street to its junction with Myrtle avenue; which is known as the Fulton avenue route, and which is in the aggregate of about five miles in length.

In witness whereof the said the Kings County Elevated Railway Company, the party of the first part, has caused its corporate seal to be hereunto affixed, and the same to be attested by the signatures of its president and of its secretary, and the parties hereto of the second part have hereunto set their hands and seals respectively as of the day and year first above written.

THE SPECIFICATIONS OF THE BOARD OF COMMISSION-ERS OF RAPID TRANSIT.

Hereby incorporated and constituting an essential part of this contract in pursuance of section 53 article seventh, of the articles of association of the said the Kings County Elevated Railway Company.

The said commissioners having, by public notice, invited the submission of plans for the construction and operation of a railway or railways for the purpose provided for by the Rapid Transit Act, and having examined and considered the numerous plans and devices submitted to them, do hereby select and decide upon the plans, as follows:

- 1. The general plan or plans of the structure shall be an elevated railway, supported upon a row or rows or columns; the track or tracks shall be carried by longitudinal girders, resting upon the tops of the columns or upon transverse girders supported by the columns; combined steel and stone columns of the American Pier and Column Company may be used where space permits or other reasons render desirable.
- 2. Where the width of the street between the curbstones does not exceed forty-two feet, the plan of construction shall be as follows, to wit, with a row of columns on the line of each curb and a superstructure carrying the tracks upon transverse girders spanning the street.
- 3. Where the width of the street or avenue between the curbstones is more than forty-two feet, the plan of construction shall be as follows, as the company constructing the railway shall elect, i. e., either, first, with a row of columns upon the line of each curb and a superstructure carrying the tracks upon tranverse girders spanning the street; or second, with two rows of columns in the roadway of the street and a superstructure carrying the tracks either upon tranverse girders or over each row of columns; but no columns authorized in this plan of construction shall be erected between any two tracks of a street railroad or railroads where such tracks are less than five feet apart. On the portion of Fulton street, below Sands street, and Broadway, below Second street, rows of columns may be set on each curb line and a superstructure erected carrying the tracks over each row of columns.
- 4. On Fulton street, Washington street, Myrtle avenue, Lexington avenue and Nostrand avenue, except as otherwise provided, and except on switches and curves, the distance between the center line of the two tracks shall not exceed 18 feet, and the track shall be equi-distant from the centre line of the street.

- 5. Whenever a column or row of columns is above authorized to be upon a line of curb, such columns or rows of columns shall be erected only within the line of curbstones, and shall be there so situated and placed as not to obstruct vehicles or the ordinary traffic or travel of the roadway or street.
- 6. There shall not be more than two rows of columns or more than two tracks in any one street or avenue or public place, except as hereinafter authorized.
- 7. No columns shall be erected between any two tracks of street railroad, now upon the surface of the roadway of the street, except as herein otherwise authorized.
- 8. Except where the width of a cross street, between the curbs thereof, is 42 feet or more, every cross street shall be spanned by a single span, when and where the plan of construction used is one having a row of columns upon a curb line.
- 9. The tranverse diameter of a column authorized to be in the roadway of any street shall not exceed 18 inches at the base and thence for at least 10 feet above the surface of the roadway; and the tranverse diameter of a column authorized to be on the line of a curb, shall not exceed 26 inches at the base and thence for at least 10 feet above the surface of the roadway.
- 8a. When and where the plan of construction used is one having two rows of columns in the roadway of the street, no columns shall be erected within the curb line of a cross street, elsewhere than upon the center line of such cross street, but may be there erected.
- 8b. A single or double track may be placed between longitudinal girders and carried by iron floor beams, the latter supported by the longitudinal girders.
- 8c. Where columns are authorized to be in the roadway on each side of a street railroad track upon the surface of the roadway, the tranverse distance between the columns shall be at least 21 feet in the clear.
- 10. The tranverse diameter of columns, above indicated does not include fenders; and adequate fenders shall be fitted around the base of each column placed in the roadway, to prevent the hubs of the wheels of passing vehicles from striking the columns.

- 11. The longitudinal distance between columns on the curb shall be at least 20 feet.
- 12. On curves of 300 feet radius or less, the longitudinal distance between the columns in the roadway may be reduced to not less than 25 feet.
- 13. No part of the girder or superstructure shall be less than 14 feet above the level of the street.
- 14. The girders shall be of the lattice variety except when the depth is less than 15 inches, in which case they shall be plate, and shall not be continuous over more than two spans.
- 15. Upon every track there shall be at least two continuous longitudinal stringers of sufficient size, of the best quality and kind of timber suitable for the purpose. The joints of such longitudinal stringers shall be scarfed and bolted, and such stringers shall be securely fastened to every support on which they rest, so as to tie the structure firmly together and give it stiffness in a longitudinal direction. This requirement may be fulfilled either by longitudinal stringers under the rail, or by safety guards of timber, if made to comply with the above conditions.
- 16. The materials used for that part of the structure above the ground shall be wrought iron or steel except that the connections between the posts which form a cluster column may be of cast iron, and except the rails, which shall be of steel, and except the ties or longitudinal stringers supporting the rails, which shall be of the best quality and kind of selected timber. The safety guards, if of wood, shall be of the best quality and kind of timber. Wood shall not be placed in any position where it may not be readily renewed without interrupting the travel on the road.
- 17. The wrought iron shall be of the following general character: Tough, highly fibrous, and of a quality which shall be in every respect equal to that used in first-class American iron railway bridges, of an ultimate tensile strength of 60,000 pounds to the square inch.
- 18. No part of the structure shall be subjected to a greater strain or tension or compression than 10,000 pounds to the square inch; and no part shall be subjected to a greater shearing strain

than 7,500 pounds to the square inch; and the structure shall not be proportioned for a less moving load than 12,000 pounds per lineal foot for each track.

- 19. The maximum deflection of any girder under the passage of a train shall never exceed one fifteen-hundredth (1-1500) of its length.
- 20. The plates composing the longitudinal parts of a column or girder shall be in single pieces, except in the case of a girder of more than 40 feet in length.
- 21. All rivets shall be of double refined iron, which shall have an ultimate tensile strength of 60,000 pounds to the square inch. The rivet holes shall be truly and accurately opposite each other; and the rivets shall enter the holes without drifting or forcing, and shall fill the holes.
- 22. All parts which make up the section of a column, except where cluster columns are used, shall be of equal thickness and of uniform quality.
- 23. The strength of the columns shall be proportioned by Gordon's formula for the ratio of the diameter to the length, with five as a factor of safety.
- 24. The different parts of the structure and their connections shall be properly proportioned to resist all of the momentum of the train which can, by the application of brakes, or in any manner, be imparted to the structure.
- 25. The foundations for the columns shall consist of brickwork, stone work or concrete.
- 26. The masonry for foundations, where the span is 50 feet, shall measure at least four and one-half feet square upon the top, at least six feet square at the bottom, shall be at least four feet in depth, and shall rest upon two thick blocks of granite or other flagging, three feet by six, so as to make a base for the masonry not less than six feet square. When the span is more than 50 feet, the dimensions of the foundations shall be larger, and when the span is less than 50 feet, the dimensions of the foundation may be smaller; but the foundations must, in every case, have as much stability relative to the load as is above required.

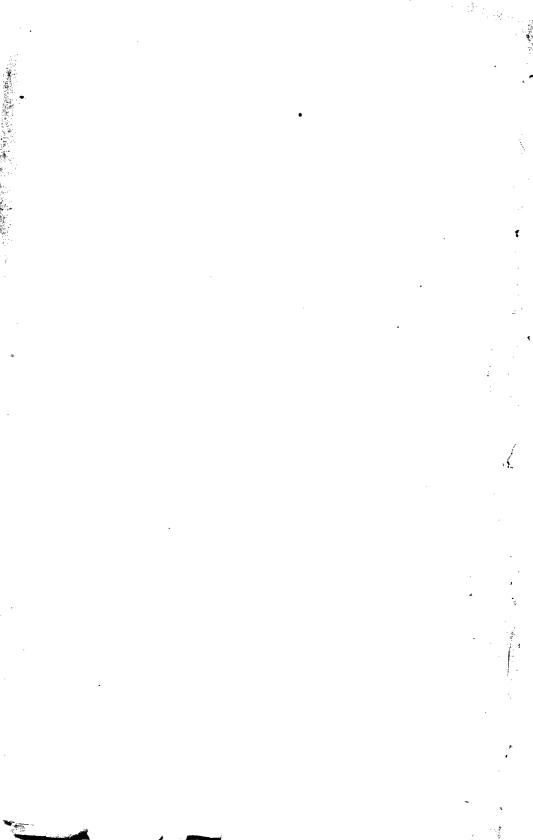
- 27. The earth is to be prepared for this masonry by being made firm and solid, and covered with a bed of good hydraulic mortar.
- 28. Every column or post shall be secured to the masonry by means of a heavy plate of cast iron, so proportioned so to distribute the weight which comes upon it uniformly over the foundation; this plate shall be fastened by sufficiently strong wrought iron bolts passing through the masonry, the bolts having heads which shall be upset and not welded, and having washers of sufficient size beneath the stones above named, and immersed in the bottom bed of hydraulic mortar. The cast iron plate, its connections with the columns, the wrought iron bolts, and their heads and washers, shall possess sufficient strength to receive and resist, equally well with the column, all strains which can come upon the latter. The cast iron shall be of the best quality suitable for bed plates which are to be covered under ground, and all castings shall be sound and fair.
- 29. All the iron work beneath the surface of the street shall be covered with hydraulic mortar, or in some way protected from rust.
- 30. Good hydraulic cement shall be used in the masonry, and Portland cement of the first quality shall be used in case the foundations are constructed of concrete. If bricks are used they shall be hard-burned and of the best quality.
- 31. The foundations, where necessary, shall be increased in area, so that in no case shall a weight greater than 2;000 pounds to the square foot come upon any base.
- 32. All wrought iron work shall receive one coat of metallic paint and oil before leaving the shop, and immediately after erection shall receive at least two coats of good paint. All parts of the structure shall, where practicable, be made accessible for the purpose of painting, and shall be well protected from rust where not accessible.
- 33. Efficient safety-guards shall be provided, so that, in case of accident, the cars shall be effectually prevented from leaving the structure.

- 34. The best form of continuous brakes, so arranged as to be under the control of the engineer, shall be applied to all trains, and to every car in each train.
- 35. Every switch shall be of such design that, if left open or placed wrong, it cannot break the main track, or offer any impediment which may cause the derailment of a passing train.
- 36. Rails shall be of steel, not less in weight than 56 pounds per lineal yard; they shall be laid and fastened in the best manner as regards security, level and parallelism, and when borne by continuous stringers, in addition to the ordinary spikes, shall have six and three-quarter inch screw-bolts to each rail, and great attention must be given to the rail joints, which must be secured by proper fish-plates.
- 37. The railway must be equipped with the most approved system of signals, to guard against accidents; and there shall be the necessary telegraph and signal devices.
- 38. Stations shall be so arranged as to be convenient of access from the street.
- 39. There shall be no steps (other than those leading from the street), sills, or any other projections about stations, over which persons can trip or stumble.
- 40. The platforms of stations shall be on a level with the platform of the cars; and nothing shall intervene between a platform and the cars that must be stepped over to enter a car.
- 41. Each station shall have ample space under cover to accommodate the passengers.
- 42. Where two rows of columns are authorized, and either row is placed in the roadway of the street, the columns shall be erected in pairs, and both columns of each pair shall stand in line upon a line at right angles to the direction of the length of the street, except on curves and switches.
- 43. The stairs and all parts of the stations, except the platform, doors, windows and inside sheathing, and except the tread of the stairs, shall be of iron.
- 44. All station platforms and stairs shall be protected by a substantial iron railing.

- 45. Every axle shall be of steel and of a quality best suited to the purpose, and shall be subjected to such tests and safeguards, and be of such dimensions as are usual in first-class railway practice.
- 46. Every wheel, whether of a car, locomotive or tender, shall have a tire of steel of the best quality and form suited to the purpose, and shall be turned on the tread. The wheel shall be fitted with the best known means of deadening noise and preventing jars.
- 47. All trains shall be provided with devices adequate to prevent ashes, grease, or water from falling into the street.
- 48. Authority is given for construction of such support turnouts, switches, sidings, connections, landing places, stations, buildings, platforms, stairways, elevators, telegraph and signal devices, and such other requisite appliances, upon the route or routes, and in the locations determined by the commissioners, as shall be proper for the purpose of rapid transit railways, and as shall be necessary to meet the requirements of the traveling public.
- 49. All car axles shall be provided with the best devices used in railway practice to catch axles and prevent them from getting adrift in case of fracture.
- 50. The structure shall present a substantial and tasteful appearance.
- 51. All the materials used in the construction of the work shall be of the best quality for the purposes for which they are to be applied, and the work shall be executed in the best style of the arts, and in a workmanlike manner.
- 52. It is the intention and spirit of these specifications to provide in every respect for a first-class structure, and no omissions of specific requirements to this effect, if any exist, shall in any case be construed in any way to invalidate this general requirement.
- 53. These specifications shall be incorporated into and shall constitute an essential part of every contract made by the company for materials or construction.

KINGS COUNTY ELEVATED RAILWAY COMPANY.

Description.	Present.	Proposed.
First mortgage Kings County Elevated		
bonds		\$3,377,000
First mortgage Fulton Elevated bonds	•	2,543,000
Second mortgage Kings County Elevated		
bonds	3,377,000	
One year's interest on same at 5 per cent.,)	
viz., October 1, 1892 to October 1, 1893,	168,850	
Six per cent. non-cumulative income de-		
bentures, no security	,	3,545,850
Second mortgage coupon scrip, represent-	•	
ing the unpaid coupons for 1890, 1891		
and $1892\ldots$	448,950	
Six months interest on same at 5 per cent.,	1	
viz., April 1, 1893 to October 1, 1893	13,947	
Second mortgage collateral trust cumula-		
tive income bonds, series B, issue not to	1	
exceed \$500,000 \dots		462 ,8 97
Subscription to second mortgage collat-		
eral trust income bonds, series A	368,750	
Discount upon \$590,000 of the above		
already sold	221,250	
Second mortgage collateral trust income		
bonds, series A, representing the above,		
the issue not to exceed \$1,000,000, bal-		
ance reserved		590,000
	\$ 10,518,747	\$ 10,518,747
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